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**1995  
YUKON AREA  
SUBSISTENCE, COMMERCIAL, AND PERSONAL USE  
SALMON FISHERIES MANAGEMENT PLAN**



Regional Information Report <sup>1</sup>: 3A95-17

By

**Alaska Department of Fish and Game  
Commercial Fisheries Management and Development Division  
Arctic-Yukon-Kuskokwim Region  
333 Raspberry Road  
Anchorage, Alaska 99518**

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**1995**  
**YUKON AREA**  
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**Regional Office:**

Alaska Department of Fish and Game  
Commercial Fisheries Management and Development Division  
333 Raspberry Road  
Anchorage, Alaska 99518  
**Telephone: (907) 344-0541**

**Lower Yukon Area Office:**

**(June through August)**

Alaska Department of Fish and Game  
Commercial Fisheries Management and Development Division  
General Delivery  
Emmonak, Alaska 99581  
**Telephone: (907) 949-1320**  
**Fishing Schedule Recording: (907) 949-1731**

**Upper Yukon Area Office:**

Alaska Department of Fish and Game  
Commercial Fisheries Management and Development Division  
1300 College Road  
Fairbanks, Alaska 99701  
**Telephone: (907) 459-7274**  
**Fishing Schedule Recording: (907) 459-7387**  
**Subsistence Permit Reporting: (907) 459-7388**



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## **1.0 INTRODUCTION**

The Commercial Fisheries Management and Development Division (CFM&D) of the Alaska Department of Fish and Game (department) is responsible for the management of subsistence, commercial, and personal use fisheries in the Yukon Area. This management plan informs fishermen, processors, and other interested persons of the outlook and the department's management strategy for the 1995 Yukon River salmon runs. Chinook, sockeye, coho, pink, and chum salmon occur in the Yukon River. Chum salmon are the most abundant, and the return is made up of an early summer chum salmon run and a later fall chum salmon run.

The Yukon Area includes all waters of the Yukon River drainage in Alaska and coastal waters from Canal Point Light, near Cape Stephens, to the Naskonat Peninsula. For management purposes the Yukon Area is divided into seven districts and ten subdistricts (Figure 1). Commercial fishing occurs along the entire 1,224 miles of the Yukon River in Alaska, and in the lower 225 miles of the Tanana River. The Coastal District of the Yukon Area is only open to subsistence fishing. The Lower Yukon Area, Districts 1, 2, and 3, includes the coastal waters of the delta and that portion of the drainage from the mouth to Old Paradise Village at river mile 301. The Upper Yukon Area, Districts 4, 5, and 6, is the Alaskan portion of the drainage upstream of Old Paradise Village. Commercial, Aboriginal, and domestic fisheries also occur in Canada, with fishery management activities conducted by the Canadian Department of Fisheries and Oceans (DFO).

## **2.0 OUTLOOK FOR 1995**

### ***2.1 Chinook Salmon***

The majority of chinook salmon returning to the Yukon River are 6-year-old fish; however, 5- and 7-year-old fish make a significant contribution to the run. In general, spawning escapements in 1989 were slightly below escapement objectives. It appears, however, that survival and production of the 1989 brood year is strong based on the relatively large contribution of 5-year-old fish to the 1994 commercial catch. Additionally, it is expected that the return of 5-year-old fish in 1995 will be at least average in magnitude based on above average parent-year escapement in 1990 and the average proportion of 4-year-old fish observed in the 1994 run. The return of 7-year-old fish in 1995 is expected to be average, as the return of the 6-year-old fish (1988 parent-year) was average in 1994. Therefore, the 1995 chinook salmon run is anticipated to be average to above average in strength. An Alaskan commercial harvest of 88,000 to 108,000 chinook salmon, near the midpoint of the guideline harvest range, is expected to be available in 1995. This harvest would be distributed as follows: 82,000 to 100,000 fish in the Lower Yukon Area and 6,000 to 8,000 fish in the Upper Yukon Area.

## ***2.2 Summer Chum Salmon***

Summer chum salmon return primarily as 4-year-old fish although substantial numbers of 5-year-old fish occur in some years. The return of 5-year-old fish in 1995 is expected to be below average based on the relatively poor escapements observed in 1990 and the below average return of 4-year-old fish in 1994. The return of 4-year-old fish in 1995 will be dependent on production from the 1991 brood year and survival of the resulting cohort. Summer chum salmon escapement to the Anvik River in 1991 was 848,000 salmon, 70% above the minimum escapement goal of 500,000 salmon. However, escapements to other spawning areas in 1991 were below average based on aerial survey escapement counts. Therefore, the overall 1995 summer chum salmon run is anticipated to be below average to average in strength. The river-wide commercial harvest is expected to be 300,000 to 600,000 summer chum salmon.

## ***2.3 Fall Chum Salmon***

The historical, estimated annual age composition of returning Yukon River fall chum salmon includes 70% age-4 fish followed by 25% age-5 fish. Age-6 and age-3 fish make up the remaining portion of the return. The brood year for returning age-4 salmon in 1995 is 1991. Fall chum salmon escapement in 1991 varied throughout the drainage. In 1991, the escapement level to both the Sheenjek and Delta Rivers exceeded minimum escapement goals; however, below desired level escapement occurred in the Toklat and Fishing Branch Rivers.

Based primarily on the parent-year escapement information, the 1995 preseason run projection is for approximately 802,000 fall chum salmon. The Board of Fisheries identified the need for a minimum of 400,000 fall chum salmon for drainage-wide escapement. A recent average of Alaskan subsistence harvests is 170,600 fall chum salmon. Anticipating a Canadian harvest towards the upper end of their guideline harvest range would indicate that a minimum of 603,200 fall chum salmon are needed in 1995 prior to allowing Alaskan commercial fishing activities. The preseason projection would suggest that a commercial harvest of up to 200,000 fall chum salmon may occur in 1995 and still meet subsistence and escapement needs. However, rebuilding efforts for both Canadian and Toklat River stocks will lower the maximum commercial harvest level that could be supported by the Yukon River fall chum salmon return. Up to 25% reduction in the allowable commercial harvest would permit additional salmon to reach the spawning grounds to aid in the rebuilding efforts. If the fall chum salmon return as projected, fishermen should expect a commercial harvest on the order of 150,000 fall chum salmon. Based on inseason information, the department may adjust the run size projection and the corresponding, allowable commercial-harvestable-surplus upwards or downwards.

## ***2.4 Coho Salmon***

Coho salmon have a later but overlapping run timing with that of fall chum salmon. Comprehensive coho salmon escapement information is lacking on the Yukon River. Coho salmon return primarily as age-4 fish. Based on limited coho salmon escapement surveys in 1991, and

assuming average survival rates, we project that there will be an above average return of coho salmon in 1995. There are no guideline harvest ranges established for coho salmon. Currently, coho salmon are considered an incidental harvest to the directed commercial fall chum salmon fishery. With a fall chum salmon commercial harvest towards the lower end of the guideline harvest range, an incidental commercial harvest of up to 60,000 coho salmon would be anticipated.

### **3.0 MANAGEMENT STRATEGY**

The overall goal of the department's research and management program is to manage the various salmon runs for maximum sustained yield under the policies set forth by the Alaska Board of Fisheries. Management of the Yukon River commercial salmon fishery is complex because it is currently impossible to determine run size and timing of individual stocks, the increasing efficiency of the commercial fleet, and allocation issues. Current escapement goals in the Yukon River drainage are based on historic escapement in key spawning index areas. In most cases, the average historic escapement level for each index area is considered a minimum escapement goal to be met or exceeded each season.

Primary management tools are guideline harvest ranges established by the Alaska Board of Fisheries (Table 1) and emergency orders. Emergency orders are used to open and close the commercial fishing seasons and to establish fishing periods and gear restrictions. The department attempts to manage the commercial fisheries such that each district's harvest is proportionally similar within their respective guideline harvest range.

Subsistence fishing occurs throughout most of the Yukon Area. Subsistence use has the highest priority among beneficial uses of the resource. In order to enforce commercial fishing regulations, it is necessary to place some restrictions on the subsistence fishery. For example, subsistence fishing is closed in most areas prior to and following the commercial salmon season. This regulation discourages the illegal activity of subsistence caught salmon being sold commercially. However, throughout the fishing season, substantially more fishing time is allowed for subsistence than for commercial purposes.

#### ***3.1 New Regulations for 1995***

The Alaska Board of Fisheries met in Anchorage in November 1994. Selected regulations that were adopted affecting the Yukon Area are presented in Appendix B.

#### ***3.2 Subsistence Fishery***

Fishermen should keep track of their subsistence salmon harvest on their subsistence catch calendar or subsistence fishing permit. If you do not receive a subsistence catch calendar in the mail and would like to receive one, contact the department office in Emmonak or Fairbanks.

### **3.2.1 Districts 1, 2, and 3 and Subdistrict 4-A**

In Districts 1, 2, and 3 and Subdistrict 4-A, salmon may be taken by subsistence fishermen seven days per week until 24 hours prior to the opening of the commercial fishing season. The Board of Fisheries adopted new subsistence regulations in 1993 and 1994 specifically designed to eliminate the sale of subsistence caught fish during commercial openings. These regulations separate the subsistence and commercial fishing periods in Districts 1, 2, and 3 and Subdistrict 4-A. During the commercial season, subsistence fishing will only be allowed between commercial periods. Subsistence fishing will open 12 hours after the close of a commercial period and will terminate 18 hours before the start of the next scheduled commercial opening.

In Districts 1, 2, and 3, regulations require fishermen to immediately remove the dorsal fin from chinook salmon taken for subsistence purposes. The sale of salmon that have had the dorsal fin removed is illegal.

### **3.2.2 Subdistricts 4-B and 4-C**

Regulations allow subsistence salmon fishing seven days per week prior to the opening of the Subdistricts 4-B and 4-C commercial season. Subsistence salmon fishing is prohibited 24 hours before the opening and 24 hours after the closure of the commercial salmon season. Beginning 24 hours after the closure of the commercial salmon season, subsistence fishermen may take salmon seven days per week.

Once the Subdistricts 4-B and 4-C commercial salmon season opens, managers will attempt to have the subsistence fishing schedule coincide with allowable commercial periods. During the commercial salmon season, subsistence fishing time in Subdistricts 4-B and 4-C will continue as two 48-hour periods per week, unless altered by emergency order. Additionally, for any commercial salmon fishing closures of greater than five days in duration during the commercial salmon season, subsistence fishermen may take salmon from 6:00 p.m. Sunday until 6:00 p.m. Friday.

### **3.2.3 District 5**

District 5 subsistence fishermen may take salmon seven days per week before the opening of the commercial salmon season. Subsistence fishermen may not take salmon 24 hours before the opening and 24 hours after the closure of the commercial salmon season. Once the commercial fishing season opens in Subdistricts 5-A, 5-B, and 5-C, subsistence fishing periods will coincide with the commercial fishing schedule.

During any commercial salmon season fishing closure of greater than five days in duration, subsistence fishermen may take salmon five days per week from 6:00 p.m. Tuesday until 6:00 p.m. Sunday. In Subdistrict 5-A, following the closure of the commercial salmon season, subsistence fishermen may take salmon from 6:00 p.m. Tuesday until 6:00 p.m. Sunday. In Subdistricts 5-B and 5-C, following the closure of the commercial season, subsistence fishermen may take salmon

seven days a week. In Subdistrict 5-D, subsistence fishermen may take salmon seven days per week throughout the season.

In portions of District 5, regulation requires subsistence fishermen to obtain subsistence salmon fishing permits. Permit areas include the Yukon River bridge area from Hess Creek to the Dall River and the Yukon River drainage upstream of Fort Yukon to the Canadian border. Subsistence fishermen may obtain a permit from the department office in Fairbanks. Regulations require all permit holders to report harvest information at the end of the fishing season.

### **3.2.4 District 6**

Regulations require salmon fishermen in District 6, the entire Tanana River Drainage, to obtain subsistence permits. Subsistence fishermen can obtain a permit from the department office in Fairbanks. Subsistence permit holders fishing in Subdistrict 6-C, and in that portion of Subdistrict 6-B upstream of a point three miles upstream of the mouth of Totchaket Slough, are required to report to the department the number of salmon taken each week. Permit holders can report their weekly catch by calling the record-a-phone at (907) 459-7387. All other Tanana River subsistence permit holders are required to report harvest information at the end of the fishing season by returning their expired permit to the Department of Fish and Game office in Fairbanks. The normal District 6 subsistence fishing schedule allows salmon fishing from 6:00 p.m. Monday until 12 noon Wednesday, and from 6:00 p.m. Friday until 12 noon Sunday, unless altered by emergency order.

## ***3.3 Commercial Fishing Reporting Requirements***

All processors and buyers of salmon are required to register with the department prior to purchasing salmon in the Yukon Area. Processors and buyers in Districts 1, 2, and 3 must register with the department office in Emmonak. Processors, buyers, and catcher-sellers in Districts 4, 5, and 6 must register with the department office in Fairbanks. Timely reporting of salmon purchases is essential for the management of these fisheries. Registered salmon buyers are required to provide a verbal report of their salmon purchases within 18 hours following the closure of a commercial fishing period. Buyers may report verbal harvest information in the Upper Yukon Area by calling a 24-hour recording at (907) 459-7388. Buyers are also required to mail or deliver fish tickets to the department within 24 hours following the closure of a commercial fishing period in the Lower Yukon Area. In the Upper Yukon Area, buyers are required to mail or deliver fish tickets to the department within 36 hours following the closure of a commercial fishing period. If there is incomplete reporting, the department may delay commercial fishing until the needed harvest reports are received. In addition, it is very important for buyers to accurately report on each fish ticket the statistical area where salmon were harvested.

State law requires that a fish ticket recording the purchase of salmon must include the current price paid per pound for each species of salmon purchased. In addition, a fish buyer is required to prominently post the current price paid for salmon at each location, including tenders, where salmon are purchased. Regulation also requires commercial fishermen to report on the fish ticket the number of salmon harvested during commercial fishing periods and not sold.

### ***3.4 Chinook and Summer Chum Salmon Commercial Season***

The 1995 chinook salmon run will be managed to achieve aerial survey escapement goals for selected streams in the Alaskan portion of the drainage, and to provide for a minimum of 18,000 chinook salmon spawning escapement and a harvest within the agreed guideline harvest range of 16,800 to 19,800 fish for Canada. Inseason run assessment will be based on test fisheries, main river sonar passage estimates, subsistence catch reports, age composition, and commercial catch information.

Conservative management is necessary in order to maintain and rebuild summer chum salmon stocks. The department will assess the summer chum salmon run inseason using the main river sonar project located near Pilot Station, test fisheries, subsistence catch reports, age composition, and commercial catch information. A comparison of the Anvik River sonar escapement estimate and the Pilot Station sonar passage estimate will be used, in conjunction with other escapement monitoring projects, to provide information concerning the size and sex ratio of escapements to non-Anvik River tributaries. Other escapement monitoring projects include the Kaltag River tower operated by the Alaska Cooperative Extension Service 4-H Fisheries, the Nulato River tower operated by Tanana Chiefs Conference, and the Andreafsky and Gisasa River weirs operated by United States Fish and Wildlife Service (USFWS).

The department will manage the early portion of the summer chum salmon run based upon the assumption that the run will be below average and that this run size will meet escapement and subsistence needs, as well as provide for a commercial harvest near the low end of the guideline harvest ranges. The commercial harvest of surplus summer chum salmon will be allocated by district or subdistrict based upon the guideline harvest ranges established by the Board of Fisheries (Table 1).

#### **3.4.1 Districts 1, 2, and 3**

Regulation requires identification of a vessel used by Districts 1, 2, and 3 commercial salmon fishermen. A vessel must display either the ADF&G vessel license number or the fisherman's 5-digit Commercial Fisheries Entry Commission (CFEC) permit serial number and the letter that follows. Symbols must be at least 12 inches high and 1 inch wide and displayed on both sides of the hull or cabin.

The directed commercial chinook salmon fishery will open by emergency order on a staggered basis beginning with District 1 when increasing subsistence and/or test-net catches of chinook salmon have occurred over a 7- to 10-day period. This management strategy provides for uninterrupted subsistence fishing in the Lower Yukon Area, and allows passage of a portion of the early run segment out of the lower river districts prior to commercial fishing.

Chinook salmon directed fishing periods are anticipated to be no more than 12 hours in duration. In District 1 fishing periods are expected to begin at 6:00 p.m. on Mondays and Thursdays. It is anticipated that fishing periods in Districts 2 and 3 will begin at 6:00 p.m. Wednesdays and

Sundays. However, fishing periods in District 3 may vary from this schedule because it has a separate guideline harvest range. Since Districts 1 and 2 have a combined guideline harvest range, the overall harvest level will determine when the directed chinook salmon fishery and commercial salmon season end. It may not be possible to allow an equal amount of fishing time for each district.

Normally, the use of unrestricted mesh size gillnets will cease when the combined Districts 1 and 2 harvest approaches 60,000 to 70,000 chinook salmon. Six inch maximum mesh size directed summer chum salmon fishing periods are anticipated to be 6 to 12 hours in duration. Because of market considerations, an effort will be made to allow summer chum salmon directed periods prior to June 30.

The combined chinook salmon commercial harvest for Districts 1 and 2 is expected to be 80,000 to 98,000 chinook and 200,000 to 300,000 summer chum salmon. The District 3 commercial harvest is expected to range between 1,800 and 2,000 chinook salmon. Because of market conditions, District 3 fishermen should ensure that they have a market for their fish.

The USFWS will be operating a weir on the East Fork of the Andreafsky River in 1995. Historical escapement information obtained from sonar and tower projects operated on this river will be used to project the 1995 spawning escapement inseason. The department will use the assessment of spawning escapement in the East Fork Andreafsky River to regulate the size of the area closed to commercial fishing near the mouth of the Andreafsky River.

#### **3.4.2 District 4**

Because of the below average to average summer chum salmon run projection, the department anticipates that the commercial salmon season in Subdistricts 4-B and 4-C may open as early as Sunday, June 25. This strategy will allow the harvest of chinook salmon and reduce the harvest of later running chum salmon.

It is anticipated that Subdistricts 4-B and 4-C will initially be placed on a schedule of two 48-hour periods per week beginning at 6:00 p.m. Sunday and 6:00 p.m. Wednesday. If subsistence fishermen are unable to meet their subsistence needs due to the commercial fishing schedule, additional subsistence only fishing time will be allowed. Commercial fishing periods in Subdistrict 4-A are anticipated to begin at 6:00 p.m. Monday and 6:00 p.m. Thursday, and no more than 24 hours in duration. Management will be based, in part, on summer chum salmon spawning escapements monitored on the Anvik, Kaltag, Nulato, and Gisasa Rivers.

The District 4 chinook salmon guideline harvest range is 2,250 to 2,850 fish. Based on preseason projections, the department will manage within the chinook salmon guideline harvest range. The District 4 early season will close when the targeted chinook or summer chum salmon harvest is reached. Based on the preseason projection, the harvest of summer chum salmon is expected to be between the lower end and midpoint of the guideline harvest ranges.

### **3.4.3 Anvik River Management Area**

During the November 1994 Board of Fisheries meeting, the Anvik River Chum Salmon Fishery Management Plan was reviewed and modified for the 1995 through 1997 fishing seasons. The Anvik River may be opened to commercial fishing for summer chum salmon if a surplus greater than the escapement goal of 500,000 fish is available. The Board of Fisheries modified the management plan during the November 1994 meeting to address concerns raised by the department and fishermen. These concerns included stating the non-allocative nature of the Anvik River commercial fishery, making the use of gillnets more restrictive, and providing for a "sunset" clause for the next board cycle. Appendix B contains the regulations pertaining to the Anvik River Management plan.

If possible, the department intends to schedule the Anvik River fishing periods coincidental with those of Subdistrict 4-A. The intent is to decrease the harvest pressure on non-Anvik River summer chum salmon and yet allow a harvest of Anvik River summer chum salmon which are in excess of the spawning escapement objective. Fish harvested in the Anvik River fishery will not count against the Subdistrict 4-A summer chum salmon guideline harvest range.

### **3.4.4 District 5**

The District 5 commercial salmon fishing season will open by emergency order once the chinook salmon run is distributed throughout the area. Assessment of run abundance and timing from downstream commercial fishing districts, along with subsistence catch reports, will provide information to determine the season opening. It is anticipated that fishing periods during the early season in Subdistricts 5-A, 5-B, and 5-C will initially be 24 or 36 hours in duration.

For Subdistrict 5-D, the department anticipates it will use emergency order authority to schedule 24- or 36-hour commercial fishing periods. This will allow the department to monitor and maintain the harvest within the guideline harvest range.

Subdistricts 5-A, 5-B, and 5-C have a guideline harvest range of 2,400 to 2,800 chinook salmon, and Subdistrict 5-D has a guideline harvest range of 300 to 500 chinook salmon. Based on the preseason projection, the department will be managing the harvest within the chinook salmon guideline harvest ranges. In years with average returns and normal run timing, the first commercial fishing period should occur between June 25 and July 5 in Subdistricts 5-A, 5-B, and 5-C, and between July 1 and July 10 in Subdistrict 5-D. It is anticipated that the early season in District 5 will close once the harvest of chinook salmon is within the guideline harvest range.

There are very few summer chum salmon present or harvested in Subdistricts 5-B, 5-C, and 5-D. The commercial harvest of summer chum salmon in District 5 will largely be a function of the management actions taken for chinook salmon.

### 3.4.5 District 6

In the spring of 1988, the Board of Fisheries held a special session in Fairbanks to discuss and evaluate the fishery management plan for the Tanana River. At this meeting, the Board of Fisheries instructed the department to continue managing District 6 on the basis of guideline harvest ranges. However, the Board of Fisheries did allow the department to manage for a different level within the guideline harvest ranges or, in some years, exceed the upper end of the guideline harvest level provided it could be determined that additional commercial fishing would not jeopardize achieving escapement goals or meeting subsistence needs.

Currently, the Tanana River inseason run strength and timing indicators are limited; these include test fish wheel catches near the village of Nenana, aerial surveys, and the performance of the commercial and subsistence fisheries. In addition, chinook salmon escapement information collected by Sport Fish Division through tagging or tower counting projects on the Chena and Salcha Rivers may be used for inseason run assessment. The test fisheries provide run timing, species composition, and information regarding whether the salmon run is building or dropping off. However, the test fisheries appear to be less useful in determining the magnitude of the run due to inter-annual variability in fish wheel location and efficiency. During the 1995 season, the Nenana test fish wheel will operate during the entire season with a "live box." No sales of salmon are expected from the test fish wheel. Aerial assessment of spawning escapement areas depends on favorable weather and water conditions. Due to the limited management tools available, the department will be conservative in the management of District 6.

It is anticipated that the opening of the District 6 commercial fishing season will be in early to mid-July. The purpose of opening the season earlier is to allow the harvest of chinook salmon prior to the increase in abundance of later running summer chum salmon. All subdistricts will open at the same time. During the early season in District 6, and unless altered by emergency order, there may be up to two 42-hour commercial fishing periods per week, from 6:00 p.m. Fridays until 12 noon Sundays, and from 6:00 p.m. Mondays until 12 noon Wednesdays. Based on the preseason projections, the early season is expected to close once the midpoint of the chinook salmon guideline harvest range of 700 chinook salmon is reached.

Additional commercial fishing may be allowed if escapement monitoring projects indicate that the escapement goals and subsistence needs are being met.

### 3.5 Fall Chum and Coho Salmon Commercial Season

The Board of Fisheries modified the Yukon River Drainage Fall Chum Salmon Management Plan during the November 1994 meeting. The modified management plan is for the 1995 season only. Among changes to the 1994 plan, the 1995 management plan now includes the following statement: *"The department will use the best available data including preseason projection, mainstem river sonar passage estimates, test fisheries indices, subsistence and commercial fishing reports, and passage estimates from escapement monitoring projects to assess the run size for the purpose of implementing this plan."* The department will consider all of these indicators in

determining the 1995 fall chum salmon run size inseason, particularly if inseason run assessment is dramatically different from the preseason projection.

The purpose of the 1995 plan is to ensure adequate escapement of fall chum salmon into the Yukon River drainage and to provide management guidelines to the department. The plan's overall objective is to provide a minimum of 400,000 fall chum salmon for drainagewide escapement. This level of escapement would increase the likelihood of achieving individual spawning stock escapement goals and rebuilding needs throughout the drainage.

The 1995 management plan directs that, with a projected fall chum salmon return of less than 400,000 fall chum salmon, commercial, sport, personal use, and subsistence fisheries will be closed (Table 2). However, more flexibility is now built into the plan: the department now has the authority to allow subsistence fisheries in areas that indicators suggest that the escapement objectives will be met. For projected run sizes between 400,000 to 600,000 fall chum salmon, the department shall close the commercial, sport, and personal use fisheries and restrict the subsistence fisheries. However, the department has the authority to allow commercial, sport, or personal use fisheries in areas that indicators suggest that escapement objectives will be met provided normal subsistence fishing schedules are occurring.

At run size projections greater than 600,000 fall chum salmon, normal personal use, sport, and subsistence fishing opportunities will occur. Further, a minimum, commercial-harvestable-surplus of 50,000 fall chum salmon, consistent with stock rebuilding plans, is needed to provide for an orderly commercial fishery. Rebuilding efforts for both Canadian and Toklat River fall chum salmon stocks will lower the maximum commercial harvest level that could be supported by the Yukon River fall chum salmon return. Up to 25% reduction in allowable commercial harvest would permit additional salmon to reach the spawning grounds to aid in these rebuilding efforts. For example, if the inseason run size projection is for a 700,000 fall chum salmon return, there would be a commercial harvestable surplus of 100,000 fall chum salmon. However, because of these rebuilding efforts, fishermen could expect a commercial harvest on the order of 75,000 fall chum salmon, with up to an additional 25,000 fall chum salmon allowed to pass through the commercial fisheries to reach the spawning grounds.

Allowable commercial harvest will be distributed by district or subdistrict proportional to the established guideline harvest range. Commercial harvest levels below the low end of the guideline harvest range or above the high end of the guideline harvest range will be distributed by district or subdistrict proportional to the midpoint of the guideline harvest range.

### **3.5.1 Districts 1, 2, and 3**

The guideline harvest range for Districts 1, 2, and 3 is 60,000 to 220,000 fall chum salmon. The department will monitor inseason abundance using the lower Yukon River setnet test fishery, Pilot Station sonar passage estimates, and subsistence and commercial catch statistics. This information, in combination with the preseason projection, will be the basis for decisions regarding management of the Districts 1, 2, and 3 fisheries. It is expected that the fall commercial fishing season will open

during late July or early August. If the salmon return as projected, the harvest in Districts 1, 2, and 3 could reach 112,000 fall chum salmon.

Regulations require District 1 commercial fishermen to register for the Set Net Only Area prior to the opening of the fall commercial fishing season. Commercial fishing period duration will likely be 12 hours in the Set Net Only Area of District 1, and 6 hours in the remainder of the Lower Yukon Area. Commercial fishing periods in the Set Net Only Area will probably be scheduled to occur overnight, while fishing periods in the remainder of the Lower Yukon Area will probably be scheduled for daylight hours.

### **3.5.2 District 4**

Current regulations do not provide for a commercial season for fall chum salmon in Subdistrict 4-A. The fall commercial season in Subdistricts 4-B and 4-C will open after August 1 by emergency order, and will close either by regulation on September 30, or earlier by emergency order. The guideline harvest range for Subdistricts 4-B and 4-C is 5,000 to 40,000 fall chum salmon. If the fall chum salmon return as projected, the department will be managing for a commercial harvest of up to 16,500 fall chum salmon. Commercial fishing periods are anticipated to be 48 hours or less in length.

### **3.5.3 District 5**

Subdistricts 5-A, 5-B, and 5-C have a guideline harvest range of 4,000 to 36,000 fall chum salmon. In years with normal run timing, the first commercial fishing period should occur in mid-August. Based on the preseason projection, a commercial harvest of up to 14,500 fall chum salmon could be expected. Commercial fishing periods will be 24 hours or less in duration.

For Subdistrict 5-D, the Board of Fisheries established a separate guideline harvest range of 1,000 to 4,000 fall chum salmon. In years with normal run timing, the first commercial period in Subdistrict 5-D would occur in early September. Based on the preseason projection, a commercial harvest of up to 2,500 fall chum salmon could be expected. Commercial fishing periods will be 48 hours or less in duration.

### **3.5.4 District 6**

As during the summer season, currently the Tanana River inseason run strength and timing indicators are very limited. These indicators include test fish wheel catches and the performance of the commercial and subsistence fisheries. The test fisheries provide run timing and species composition information. However, the test fisheries appear to be less useful in determining the magnitude of the run due to inter-annual variability in fish wheel location and efficiency. The department will continue to manage District 6 on the basis of the guideline harvest ranges. However, the Board of Fisheries did allow the department to manage for a different level within the guideline harvest range or, in some years, exceed the guideline harvest range provided the department could justify that additional commercial fishing would not jeopardize achieving

escapement goals or meeting subsistence needs. Due to the limited management tools available, the department will be conservative in the management of District 6.

District 6 has a guideline harvest range of 2,750 to 20,500 fall chum salmon. In years with normal run timing, the first late season commercial fishing period would occur in early to mid-September. Based on the preseason projection, a commercial harvest of up to 8,500 fall chum salmon could be expected. Commercial fishing periods will be 42 hours or less in duration.

The department will be conducting a conventional tagging study in 1995 to estimate the population abundance of fall chum salmon in the upper Tanana River, upstream of the Kantishna River. Results of the project will be evaluated to determine the feasibility of implementing the tagging study on an annual basis to be used as an inseason management tool for assessing upper Tanana River drainage run strength and timing. However, it is anticipated that information collected in 1995 by the tagging study will be of limited use for inseason management because of the absence of an historical data base. No inseason population estimates will be generated in 1995.

### **3.5.5 Toklat River Fall Chum Salmon Rebuilding Plan**

The Board of Fisheries reviewed and modified the Toklat River Fall Chum Salmon Rebuilding Management Plan during the November 1994 meeting. The modified plan will be in effect through the 1997 fishing season. The rebuilding plan continues to restrict the subsistence fishery in the Kantishna River. However, the department now has the authority to allow normal subsistence fishing opportunities in the Kantishna River if it can be determined that the Toklat River escapement objective will be achieved. This may be possible with the continuation of the Toklat River sonar project. This project was first attempted in 1994, and provided the department with daily inseason salmon passage estimates. Using this project, the department may be able to predict inseason if the Toklat River escapement objective will be achieved. Regulations require a special Kantishna River subsistence salmon fishing permit to participate in this fishery. Permits are available at the Alaska Department of Fish and Game, Commercial Fisheries Management and Development Division office in Fairbanks. Additionally, the Toklat River rebuilding plan continues to direct that the fishery management strategy is to allow a commercial harvest that is lower than the maximum harvest level that could be supported by the Yukon River fall chum salmon return. This will allow more fish to reach the spawning grounds of the Toklat River to aid in the rebuilding effort.

### **3.5.6 Coho Salmon**

A slightly later but overlapping coho salmon run with the fall chum salmon run complicates the fall season salmon management program. Coho salmon escapement assessment is very limited in the Yukon River drainage due to funding limitations and survey conditions at that time of year. Fall chum salmon is the primary species of management concern during the fall season. There are no guideline harvest ranges established for coho salmon. Consequently, commercial harvest of coho salmon is a function of the timing, frequency, and duration of the periods established for the more

numerous fall chum salmon. With a 1995 fall chum salmon commercial harvest towards the low end of the guideline harvest range, an incidental harvest of less than 60,000 coho salmon would be anticipated in 1995.

### ***3.6 Personal Use Fishery***

Regulations were in effect from 1988 until July 1, 1990, that prohibited non-rural residents from participating in subsistence fishing. In those years, non-rural residents harvested salmon under personal use fishing regulations. The Alaska Supreme Court ruled, effective July 1990, that every resident of the State of Alaska was an eligible subsistence user, making the personal use category obsolete. From July 1, 1990 through 1992, all Alaskan residents qualified as subsistence users.

In 1992, the legislature passed a subsistence law during a special session that allowed the Board of Fisheries to divide the state into subsistence or non-subsistence zones. The only non-subsistence zone in the Yukon Area that the Board of Fisheries and Game created was the Fairbanks Non-Subsistence Use Zone, which basically included the Fairbanks North Star Borough. In October 1993, a Superior Court Judge ruled that this 1992 subsistence law was unconstitutional. The court granted the state a stay, which allowed for status quo fishing regulations to remain in effect until April 11, 1994, when the Alaska Supreme Court vacated the State's motion for a stay. All Alaska residents qualified as subsistence users during the 1994 fishing season, and presently qualify as subsistence users for the 1995 fishing season.

## **4.0 U.S./CANADA YUKON RIVER SALMON NEGOTIATIONS AND INTERIM AGREEMENT**

The United States and Canada signed a treaty in 1985 for the cooperative conservation and management of salmon in Southeast Alaska, British Columbia, Washington, and Oregon. It is called the Pacific Salmon Treaty. In that treaty, the two sides agreed to initiate negotiations on cooperative arrangements for the Yukon River. The Yukon River negotiations began in 1985. The negotiating teams include advisors from all along the river. They typically meet once or twice a year to negotiate on the remaining issues.

The purpose of these negotiations is to develop coordinated conservation and management between the U.S. and Canada for the chinook and fall chum salmon stocks which spawn in the Yukon River drainage in Canada. The Alaska stocks, and Alaska's management of those stocks, is not directly a part of these international negotiations.

In the course of these negotiations over the years, both sides have agreed that spawning escapements of chinook and fall chum salmon in the Yukon River drainage in Canada had declined, were substantially below levels necessary to achieve optimum sustained yield, and needed to be rebuilt. It will require both sides working together for rebuilding to be successful.

For Yukon River mainstem chinook salmon, a six-year stabilization plan, ending after the 1995 season, was agreed upon beginning with the 1990 season. The objective of this plan is to stabilize the stock by achieving a spawning escapement of 18,000 or more chinook salmon for each year through 1995. By "stabilization" we mean preventing further declines in spawning escapements by achieving an escapement of at least 18,000 chinook per year prior to rebuilding. The U.S. part of this effort is to endeavor to deliver between 34,800 and 37,800 chinook salmon to the Canadian border on the mainstem Yukon River. The Canadian part of this effort is to endeavor to manage the harvest of chinook salmon in the mainstem Yukon River drainage in Canada by all user groups combined within a guideline harvest range of 16,800 to 19,800 chinook salmon. A rebuilding plan for Canadian spawned chinook salmon needs to be developed prior to the 1996 season.

For Yukon River mainstem fall chum salmon, a 12-year rebuilding plan, ending after the 2001 season, was agreed upon beginning with the 1990 season. The objective of this plan is to rebuild the stock by achieving a spawning escapement of 80,000 or more fall chum for all brood years in the cycle by the year 2001. By "rebuilding" we mean building spawning escapements back up to prior levels in planned steps over a number of years. The U.S. part of this effort is to endeavor to deliver to the Canadian border on the mainstem Yukon River the number of fall chum salmon necessary to meet the spawning escapement objective for that year in the rebuilding program, and provide for a Canadian catch within an agreed range. For 1995, the agreement is to endeavor to deliver between 103,600 and 112,600 fall chum salmon to the Canadian border on the mainstem Yukon River. The Canadian part of this effort is to endeavor to manage the harvest of fall chum salmon in the mainstem Yukon River drainage in Canada by all user groups combined within a guideline harvest range of 23,600 to 32,600 fall chum salmon.

For the Porcupine River stocks, the two sides have basically agreed only that more needs to be learned, and that new fisheries in the Porcupine River will not be initiated for a number of years.

An innovative development in these negotiations was the idea of establishing a special fund for salmon restoration and enhancement work. This would be targeted on the Canadian spawned chinook and fall chum salmon stocks, but would be intended for the benefit of fishermen on both sides. The U.S. federal government would make annual contributions to this fund based on an estimate of the number of Canadian-spawned salmon in the Alaska catch, the value of those fish, and an adjustment factor called "deeming," which takes into account the U.S. entitlement to some of the salmon that spawn in Canada, due to our role in the production and conservation of those stocks.

There are a number of issues that remain to be resolved, with the two major areas being: 1) catch sharing from the stocks that spawn in Canada after rebuilding is completed, and 2) the deeming issue, and related to that, the determination of the U.S. contribution to the Restoration and Enhancement Fund.

During the last year there was realization that, while reaching a comprehensive long term agreement remained a formidable challenge given some of the key unresolved issues, there would be benefits that could be realized by more formally implementing the areas of agreement to date. Work proceeded during 1994 to draw together the agreed elements to date into an interim agreement. A negotiation session was held in Whitehorse, Yukon Territory, Canada in early

December 1994 to complete final drafting of this interim Yukon River Agreement, which has taken the form of an exchange of diplomatic notes with two attachments. The first contains the body of the interim agreement and is based upon the areas of agreement to date in these negotiations. The second contains some preamble from the former Protocol draft not needed for an interim agreement, and those elements deferred for further negotiation while the interim agreement is in effect. Formal signing and exchange of the diplomatic notes took place in February 1995.

There will be a Yukon River Panel that will meet periodically to implement the interim Yukon River Agreement. The Panel will also administer the salmon restoration and enhancement fund. The Panel will consist of a U.S. side and a Canadian side. The two sides will need to agree on a decision for an action to be taken. In other words, the Panel can't do anything unless the U.S. side agrees. The U.S. side of this Yukon River Panel will consist of Alaskan Yukon River fishers, Alaska state government officials, and U.S. federal government officials. There will be an advisory group of Alaska Yukon River fishers providing input to the U.S. side. There will also be a Joint Technical Committee providing support to the Panel. The focus of the Panel will be the salmon stocks that spawn in the Canadian portion of the Yukon River drainage. The Panel will make its recommendation to the management agencies in Alaska and Canada.

The interim agreement will be in place through 1997, with an option to extend if both sides so decide. This will allow for a try-out period to get underway with a Yukon River Panel and a Yukon River Salmon Restoration and Enhancement Fund so that we can see whether this process works effectively, without making a longer term and more formal treaty commitment. The panel will likely meet two or more times per year to review information, make recommendations to the management agencies, and administer the Fund. Negotiations will likely resume on the unresolved issues for the long term agreement after the Panel process has had a chance to get underway.

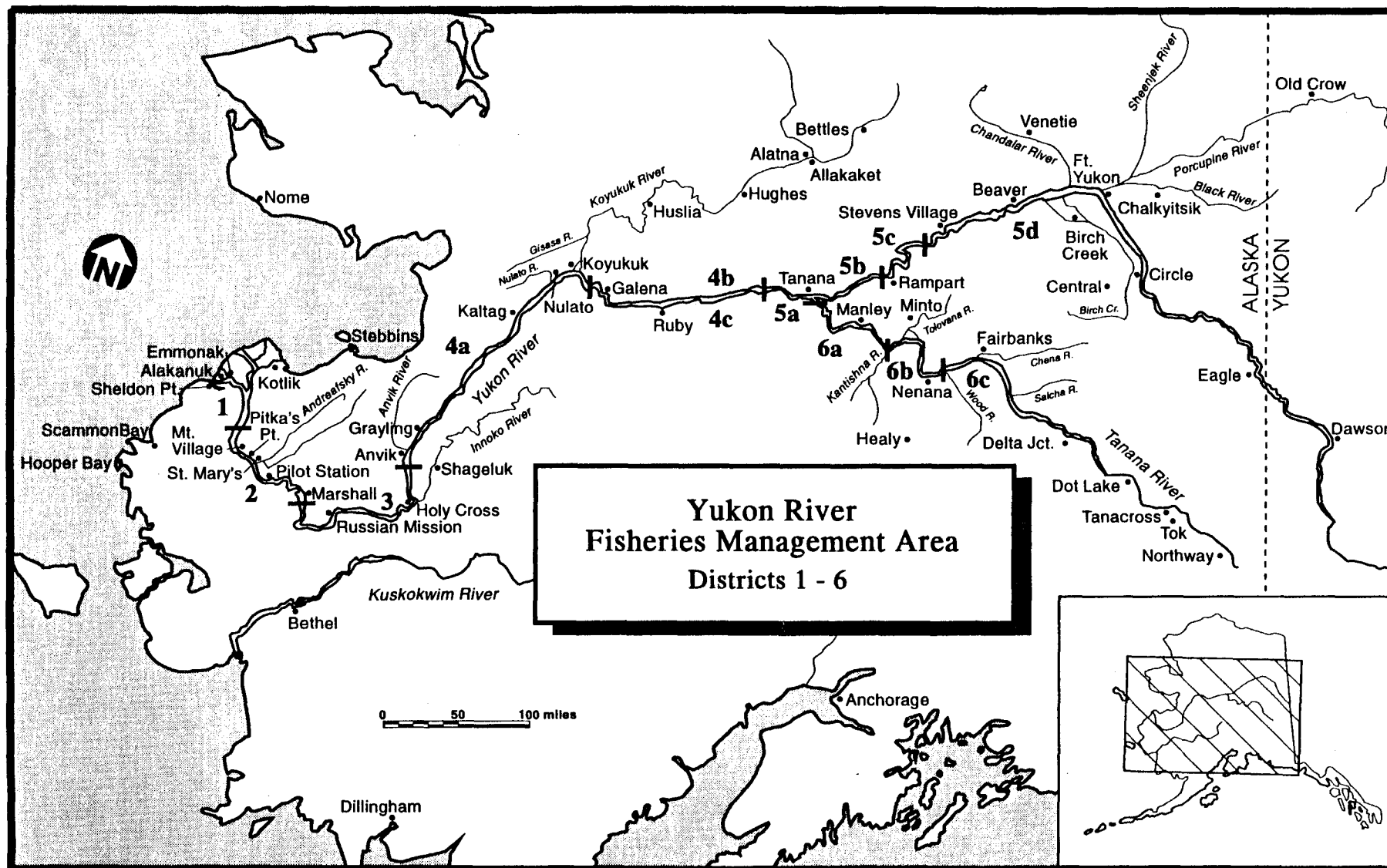


Figure 1. Map of Alaskan portion of the Yukon River drainage, showing communities and fishing districts.

**Table 1. Guideline harvest ranges and mid-points for Alaskan commercial harvest of chinook, summer and fall chum salmon, Yukon Area, 1995.**

Chinook Salmon						
District or Subdistrict	Guideline Harvest Range					
	Lower		Mid-Point		Upper	
	Numbers	Percent	Numbers	Percent	Numbers	Percent
1 and 2	60,000	89.1	90,000	91.6	120,000	92.9
3	1,800	2.7	2,000	2.0	2,200	1.7
4	2,250	3.3	2,550	2.6	2,850	2.2
5A,B,C	2,400	3.6	2,600	2.6	2,800	2.2
5D	300	0.4	400	0.4	500	0.4
6	600	0.9	700	0.7	800	0.6
Total	67,350	100.0	98,250	100.0	129,150	100.0
Summer Chum Salmon						
District or Subdistrict	Guideline Harvest Range					
	Lower		Mid-Point		Upper	
	Numbers	Percent	Numbers	Percent	Numbers	Percent
1 and 2	251,000	62.8	503,000	62.9	755,000	62.9
3	6,000	1.5	12,500	1.6	19,000	1.6
4A a	113,000	28.3	225,500	28.2	338,000	28.2
4B,C	16,000	4.0	31,500	3.9	47,000	3.9
5	1,000	0.3	2,000	0.3	3,000	0.3
6	13,000	3.3	25,500	3.2	38,000	3.2
Total	400,000	100.0	800,000	100.0	1,200,000	100.0
Fall Chum Salmon						
District or Subdistrict	Guideline Harvest Range					
	Lower		Mid-Point		Upper	
	Numbers	Percent	Numbers	Percent	Numbers	Percent
1, 2, and 3	60,000	82.5	140,000	71.2	220,000	68.6
4B,C	5,000	6.9	22,500	11.4	40,000	12.5
5A,B,C	4,000	5.5	20,000	10.2	36,000	11.2
5D	1,000	1.4	2,500	1.3	4,000	1.2
6	2,750	3.8	11,625	5.9	20,500	6.4
Total	72,750	100.0	196,625	100.0	320,500	100.0

a Or the equivalent roe poundage of 61,000 to 183,000 pounds or some combination of fish and pounds of roe.

Table 2. The Yukon River drainage fall chum salmon Management Plan, 1995.

Run Size Estimate <i>b</i> (Point Estimate)	Recommended Management Action <i>a</i> Fall Chum Salmon Directed Fisheries			
	Commercial	Personal Use	Sport	Subsistence
Less Than 400,000	Closure	Closure	Closure	Closure <i>c</i>
400,000 to 600,000	Closure <i>d</i>	Closure <i>d</i>	Closure <i>d</i>	Restrictions <i>c</i>
Greater Than 600,000	Commercial Fishing Allowed <i>e</i>	Normal Fishing Schedules	Retention Allowed	Normal Fishing Schedules

- a* Considerations for the Toklat River and Canadian Mainstem rebuilding plans may require more restrictive management actions. This plan will be reviewed by the Board of Fisheries following the 1995 season.
- b* The department will use the best available data including preseason projections, mainstem river sonar passage estimates, test fisheries indices, subsistence and commercial fishing reports, and passage estimates from escapement monitoring projects to assess the run size.
- c* The department may, by emergency order, allow a less restrictive or a normal subsistence fishing schedule in areas that indicator(s) suggest that the escapement goal(s) in that area will be achieved.
- d* The department may, by emergency order, allow commercial, personal use, and sport fishing in areas that have normal subsistence fishing schedules and indicator(s) that suggest that the escapement goal(s) in that area will be achieved.
- e* A commercial harvestable surplus of at least 50,000 fall chum salmon (consistent with the Toklat River and Canadian Rebuilding Plans) is needed to provide for an orderly commercial fishery. Harvest will be distributed by district or subdistrict proportional to the guideline harvest range established in 5 AAC 05.365. The department shall distribute the harvest at levels below the low end of the guideline harvest range by district or subdistrict proportional to the mid-point of the guideline harvest range.

5 AAC 05.365. (4) manage the commercial fishery during the fall chum salmon season for a guideline harvest range of 72,750 to 320,000 chum salmon, distributed as follows:

- (A) Districts 1, 2 and 3: 60,000 to 220,000 chums;  
 (B) Subdistricts 4-B and 4-C: 5,000 to 40,000 chums;  
 (C) Subdistricts 5-A, 5-B, and 5-C: 4,000 to 36,000 chums;  
 (D) Subdistrict 5-D: 1,000 to 4,000 chums;  
 (E) District 6: 2,750 to 20,500 chums.

## **Appendix A**

### **Historical Commercial Harvest and Escapement Information**

Appendix A.1. Commercial chinook salmon sales and estimated harvest by district and country, Yukon River drainage, 1961-1994.

Upper Yukon Area																			Alaska Total	Canada Total	Grand Total
Lower Yukon Area					District 4			District 5			District 6			Subtotal							
Year	District 1	District 2	District 3	Subtotal	Number	Roe	Estimated Harvest	Number	Roe	Estimated Harvest	Number	Roe	Estimated Harvest	Number	Roe	Estimated Harvest					
1961	84,466	29,026	4,368	117,860	-	-	-	-	-	-	-	-	-	1,804	-	1804	119,664	3,446	123,110		
1962	67,099	22,224	4,687	94,010	-	-	-	-	-	-	-	-	-	724	-	724	94,734	4,037	98,771		
1963	85,004	24,221	7,020	116,245	-	-	-	-	-	-	-	-	-	803	-	803	117,048	2,283	119,331		
1964	67,555	20,246	4,705	92,506	-	-	-	-	-	-	-	-	-	1,081	-	1,081	93,587	3,208	96,795		
1965	89,268	23,763	3,204	116,235	-	-	-	-	-	-	-	-	-	1,863	-	1,863	118,098	2,265	120,363		
1966	70,788	16,927	3,612	91,327	-	-	-	-	-	-	-	-	-	1,988	-	1,988	93,315	1,942	95,257		
1967	104,350	20,239	3,618	128,207	-	-	-	-	-	-	-	-	-	1,449	-	1,449	129,656	2,187	131,843		
1968	79,465	21,392	4,543	105,400	-	-	-	-	-	-	-	-	-	1,126	-	1,126	106,526	2,212	108,738		
1969	71,688	14,756	3,595	90,039	-	-	-	-	-	-	-	-	-	988	-	988	91,027	1,640	92,667		
1970	56,648	17,141	3,705	77,494	-	-	-	-	-	-	-	-	-	1,651	-	1,651	79,145	2,611	81,756		
1971	86,042	19,226	3,490	108,758	-	-	-	-	-	-	-	-	-	1,749	-	1,749	110,507	3,178	113,685		
1972	70,052	17,855	3,841	91,748	-	-	-	-	-	-	-	-	-	1,092	-	1,092	92,840	1,769	94,609		
1973	56,981	13,859	3,204	74,044	-	-	-	-	-	-	-	-	-	1,309	-	1,309	75,353	2,199	77,552		
1974	71,840	17,948	3,480	93,268	685	-	685	2,663	-	2,663	1,473	-	1,473	4,821	-	4,821	98,089	1,808	99,897		
1975	44,585	11,315	4,177	60,077	389	-	389	2,872	-	2,872	500	-	500	3,761	-	3,761	63,838	3,000	66,838		
1976	62,410	16,556	4,148	83,114	409	-	409	3,151	-	3,151	1,102	-	1,102	4,662	-	4,662	87,776	3,500	91,276		
1977	69,915	16,722	3,965	90,602	985	-	985	4,162	-	4,162	1,008	-	1,008	6,155	-	6,155	96,757	4,720	101,477		
1978	59,006	32,924	2,916	94,846	608	-	608	3,079	-	3,079	635	-	635	4,322	-	4,322	99,168	2,975	102,143		
1979	75,007	41,498	5,018	121,523	1,989	-	1,989	3,389	-	3,389	772	-	772	6,150	-	6,150	127,673	6,175	133,848		
1980	90,382	50,004	5,240	145,626	1,521	-	1,521	4,891	-	4,891	1,947	-	1,947	8,359	-	8,359	153,985	9,500	163,485		
1981	99,506	45,781	4,023	149,310	1,347	-	1,347	6,374	-	6,374	987	-	987	8,708	-	8,708	158,018	8,593	166,611		
1982	74,450	39,132	2,609	116,191	1,087	-	1,087	5,385	-	5,385	981	-	981	7,453	-	7,453	123,644	8,640	132,284		
1983	95,457	43,229	4,106	142,792	601	-	601	3,606	-	3,606	911	-	911	5,118	-	5,118	147,910	13,027	160,937		
1984	74,671	36,697	3,039	114,407	961	-	961	3,669	-	3,669	867	-	867	5,497	-	5,497	119,904	9,885	129,789		
1985	90,011	48,365	2,588	140,964	664	-	664	3,418	-	3,418	1,142	-	1,142	5,224	-	5,224	146,188	12,573	158,761		
1986	53,035	41,849	901	95,785	502	-	502	2,733	-	2,733	950	-	950	4,185	-	4,185	99,970	10,797	110,767		
1987	76,643	47,458	2,039	126,140	1,524	-	1,524	3,758	-	3,758	3,338	-	3,338	8,620	-	8,620	134,760	10,864	145,624		
1988	56,120	35,120	1,767	93,007	3,159	-	3,159	3,436	-	3,436	762	-	762	7,357	-	7,357	100,364	13,217	113,581		
1989	61,570	33,166	1,645	96,381	2,790	-	2,790	3,286	-	3,286	1,741	-	1,741	7,817	-	7,817	104,198	9,789	113,987		
1990	51,199	33,061	2,341	86,601	3,536	8	3,538	3,353	47	3,365	1,757	1,676	2,156	8,646	1,731	9,059	95,660	11,324	106,984		
1991	56,332	39,260	2,344	97,936	2,446	2,222	3,582	3,810	62	3,826	686	1,545	1,072	6,942	3,829	8,480	106,416	10,906	117,322		
1992	74,212	38,139	1,819	114,170	1,651	2,273	2,394	3,852	7	3,855	572	884	753	6,075	3,164	7,002	121,172	10,877	132,049		
1993	49,286	37,293	1,501	88,080	1,349	701	1,577	3,008	0	3,008	1,113	1,313	1,445	5,470	2,014	6,030	94,110	10,350	104,460		
1994	62,241	41,692	1,114	105,047	2,216	564	2,443	3,739	10	3,744	2,135	1,820	2,606	8,090	2,394	8,793	113,840	12,028	125,868		
5 Yr Ave 1984-88	70,096	41,898	2,067	114,061	1,362	-	1,362	3,403	-	3,403	1,412	-	1,412	6,177	-	6,177	120,237	11,467	131,704		
5 Yr Ave 1989-93	58,520	36,184	1,930	96,634	2,354	-	2,776	3,462	-	3,468	1,174	1,084	1,433	6,990	2,148	7,678	104,311	10,649	114,960		

<sup>a</sup> Harvest reported in numbers of fish sold in the round and pounds of roe sold. Since 1990, efforts were made to separate chinook roe from summer chum roe. Does not include department test fish sales.

<sup>b</sup> All fish sold in the round. Includes department test fish sales prior to 1988.

<sup>c</sup> The estimated harvest is the fish sold in the round plus the estimated number of females to produce the roe sold.

<sup>d</sup> In 1974, District 4 was subdivided to include Districts 5 and 6.

<sup>e</sup> Includes the illegal sales of 653 chinook salmon.

<sup>f</sup> Includes the illegal sales of 2,136 chinook salmon.

<sup>g</sup> Includes the illegal sales of 3,211 chinook salmon.

<sup>h</sup> Includes the illegal sales of 1,101 chinook salmon.

<sup>i</sup> Includes the illegal sales of 2,711 chinook salmon.

<sup>j</sup> Includes the illegal sales of 284 chinook salmon.

<sup>k</sup> Includes the illegal sales of 1,218 chinook salmon.

<sup>m</sup> Includes the illegal sales of 207 chinook salmon.

Appendix A.2. Yukon River drainage total estimated commercial related summer chum salmon harvest by area and district, 1967-1994.

Upper Yukon Area																	
Lower Yukon Area <sup>a</sup>					District 4			District 5			District 6			Subtotal			Total Harvest
Year	District 1	District 2	District 3	Subtotal	Number	Roe	Estimated Harvest <sup>c</sup>	Number	Roe	Estimated Harvest <sup>c</sup>	Number	Roe	Estimated Harvest <sup>c</sup>	Number	Roe	Estimated Harvest <sup>c</sup>	
1967	9,453	1,425	57	10,935	-	-	-	-	-	-	-	-	-	0	0	0	10,935
1968	12,995	1,407	68	14,470	-	-	-	-	-	-	-	-	-	0	0	0	14,470
1969	56,886	5,080	-	61,966	-	-	-	-	-	-	-	-	-	0	0	0	61,966
1970	117,357	19,649	-	137,006	-	-	-	-	-	-	-	-	-	0	0	0	137,006
1971	93,928	6,112	50	100,090	-	-	-	-	-	-	-	-	-	0	0	0	100,090
1972	114,234	20,907	527	135,668	-	-	-	-	-	-	-	-	-	0	0	0	135,668
1973	221,644	63,402	463	285,509	-	-	-	-	-	-	-	-	-	0	0	0	285,509
1974 <sup>d</sup>	466,004	74,152	1,721	541,877	27,866	-	27,866	6,831	-	6,831	13,318	-	13,318	48,015	0	48,015	589,892
1975	418,323	99,139	-	517,462	165,054	-	165,054	12,997	-	12,997	14,782	-	14,782	192,833	0	192,833	710,295
1976	273,204	99,190	9,802	382,196	211,307	-	211,307	774	-	774	6,617	-	6,617	218,698	0	218,698	600,894
1977	250,652	105,679	3,412	359,743	169,541	-	169,541	1,274	-	1,274	4,317	-	4,317	175,132	0	175,132	534,875
1978	393,785	227,548	27,003	648,336	364,184	16,920	381,104	4,892	605	5,497	34,814	8,236	43,050	403,890	25,761	429,651	1,077,987
1979	369,934	172,838	40,015	582,787	169,430	35,317	204,747	8,608	1,009	9,617	18,491	3,891	22,382	196,529	40,217	236,746	819,533
1980	391,252	308,704	44,782	744,738	147,560	135,824	283,384	456	-	456	35,855	3,282	39,137	183,871	139,106	322,977	1,067,715
1981	507,158	351,878	54,471	913,507	59,718	187,032	330,445	1,236	49	1,285	32,477	1,987	34,464	93,431	189,068	366,194	1,279,701
1982	249,516	182,344	4,086	435,946	3,647	151,281	257,719	213	21	234	21,597	1,517	23,114	25,457	152,819	281,067	717,013
1983	451,164	248,092	14,600	713,856	6,672	148,125	255,388	42	1,856	1,898	24,309	18	24,327	31,023	149,999	281,613	995,469
1984	292,676	236,931	1,087	530,694	1,009	166,842	278,070	645	47	692	56,249	335	56,584	57,903	167,224	335,346	866,040
1985	247,486	188,099	1,792	437,377	12,007	247,085	427,483	700	-	700	66,913	1,540	68,453	79,620	248,625	496,636	934,013
1986	381,127	288,427	442	669,996	300	269,545	465,535	690	-	690	50,483	2,146	52,629	51,473	271,691	518,854	1,188,850
1987	222,898	174,876	3,501	401,275	29,991	121,474	209,800	362	44	406	10,610	450	11,060	40,963	121,968	221,266	622,541
1988	645,322	424,461	13,965	1,083,748	24,051	254,526	490,074	722	363	1,085	40,129	1,646	41,775	64,902	256,535	532,934	1,616,682
1989	544,373 <sup>e</sup>	343,032	7,578	894,983	18,554	283,305	510,244	154	373	527	42,115	4,871	46,986	60,823	288,549	557,757	1,452,740
1990	146,725	131,755	643	279,123	12,364	105,723	222,550	11	594	671	11,127 <sup>g</sup>	3,059	14,833	23,502	109,376	238,054	517,177
1991	140,470 <sup>h</sup>	175,149	8,912	324,531	6,381	137,232	309,644	4	28	35	18,197	4,716	23,892	24,582	141,976	333,571	658,102
1992	177,329 <sup>i</sup>	147,129 <sup>j</sup>	65	324,523	2,659	110,809	211,396	102	295	430	5,029	1,892	7,228	7,790	112,996	219,054	543,577
1993	73,659	19,332	463	93,454	27	22,447	42,957	0	0	0	3,041	515	3,705	3,068	22,962	46,662	140,116
1994	42,332	12,869	35	55,236	3,611	89,717	171,607	229	212	464	21,208	7,828	31,434	25,048	97,757	203,505	258,741
5 Yr Ave 1984-88	357,902	262,559	4,157	624,618	13,472	211,894	374,192	624	91	715	44,877	1,223	46,100	58,972	213,209	421,007	1,045,625
5 Yr Ave 1989-93	216,511	163,279	3,532	383,323	7,997	131,903	259,358	54	258	333	15,902	3,011	19,329	23,953	135,172	279,020	662,342

<sup>a</sup> Harvest reported in numbers of fish sold in the round and pounds of roe. Roe sales may include some pink and chinook salmon roe. Does not include department test fish sales.

<sup>b</sup> All sales are fish in the round. Includes department test fish sales prior to 1988.

<sup>c</sup> The estimated harvest is the fish sold in the round plus the estimated number of females caught to produce the roe sold. In addition, the estimated harvest for District 4 includes the estimated number of unsold males harvested.

<sup>d</sup> In 1974, District 4 was subdivided to include Districts 5 and 6.

<sup>e</sup> Includes the illegal sales of 150 summer chum salmon in District 1.

<sup>f</sup> Does not include 1,233 female summer chum salmon sold in Subdistrict 6-C with roe extracted and roe sold separately. These fish are included in estimated harvest to produce roe sold.

<sup>g</sup> Includes the illegal sales of 1,023 summer chum salmon.

<sup>h</sup> Includes the illegal sales of 31 summer chum salmon.

<sup>i</sup> Includes the illegal sale of 91 summer chum salmon.

Appendix A.3 Commercial fall chum salmon sales and estimated harvest by district and country, Yukon River drainage, 1961-1994.

Year	Upper Yukon Area																Alaska Numbers	Canada Total	Grand Total
	Lower Yukon Area				District 4			District 5			District 6			Subtotal					
	District 1	District 2	District 3	Subtotal	Numbers	Roe	Estimated Harvest	Numbers	Roe	Estimated Harvest	Numbers	Roe	Estimated Harvest	Numbers	Roe	Estimated Harvest			
1961	42,461	-	-	42,461	-	-	-	-	-	-	-	-	-	0	0	0	42,461	3,276	45,737
1962	53,116	-	-	53,116	-	-	-	-	-	-	-	-	-	0	0	0	53,116	936	54,052
1963	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	0	0	2,196	2,196
1964	8,347	-	-	8,347	-	-	-	-	-	-	-	-	-	0	0	0	8,347	1,929	10,276
1965	22,936	-	-	22,936	-	-	-	-	-	-	-	-	-	381	0	381	23,317	2,071	25,388
1966	69,836	-	1,209	71,045	-	-	-	-	-	-	-	-	-	0	0	0	71,045	3,157	74,202
1967	36,451	-	1,823	38,274	-	-	-	-	-	-	-	-	-	0	0	0	38,274	3,343	41,617
1968	49,857	-	3,068	52,925	-	-	-	-	-	-	-	-	-	0	0	0	52,925	453	53,378
1969	128,866	-	1,722	130,588	-	-	-	-	-	-	-	-	-	722	0	722	131,310	2,279	133,589
1970	200,306	4,858	3,285	208,449	-	-	-	-	-	-	-	-	-	1,146	0	1,146	209,595	2,479	212,074
1971	188,533	-	-	188,533	-	-	-	-	-	-	-	-	-	1,061	0	1,061	189,594	1,761	191,355
1972	136,711	12,898	1,313	150,922	-	-	-	-	-	-	-	-	-	1,254	0	1,254	152,176	2,532	154,708
1973	173,783	45,304	-	219,087	-	-	-	-	-	-	-	-	-	13,003	0	13,003	232,090	2,806	234,896
1974	176,036	53,540	552	230,128	9,213	-	9,213	23,551	-	23,551	26,884	-	26,884	59,648	0	59,648	289,776	2,544	292,320
1975	158,183	51,666	5,590	215,439	13,666	-	13,666	27,212	-	27,212	18,692	-	18,692	59,570	0	59,570	275,009	2,500	277,509
1976	105,851	21,212	4,250	131,313	1,742	-	1,742	5,387	-	5,387	17,948	-	17,948	25,077	0	25,077	156,390	1,000	157,390
1977	131,758	51,994	15,851	199,603	13,980	-	13,980	25,730	-	25,730	18,673	-	18,673	58,383	0	58,383	257,986	3,990	261,976
1978	127,947	51,646	11,527	191,120	10,988	1,721	12,709	21,016	5,220	26,236	13,259	3,687	16,946	45,263	10,628	55,891	247,011	3,356	250,367
1979	109,406	94,042	25,955	229,403	48,899	3,199	52,096	47,459	8,097	55,556	34,185	7,170	41,355	130,543	18,466	149,009	378,412	9,084	387,496
1980	106,829	83,881	13,519	204,229	27,978	4,347	32,325	41,771	605	42,376	19,452	68	19,520	89,201	5,020	94,221	298,450	9,000	307,450
1981	167,834	154,883	19,043	341,760	12,082	1,311	13,393	86,620	6,955	93,575	25,989	3,019	29,008	124,691	11,285	135,976	477,736	15,260	492,996
1982	97,484	96,581	5,815	199,880	3,894	167	4,061	13,593	42	13,635	6,820	596	7,416	24,307	805	25,112	224,992	11,312	236,304
1983	124,371	85,645	10,018	220,034	4,482	1,963	6,445	43,993	0	43,993	34,089	3,101	37,190	82,564	5,064	87,628	307,662	25,990	333,652
1984	78,751	70,803	6,429	155,983	7,625	2,215	9,840	24,060	57	24,117	20,564	56	20,620	52,249	2,328	54,577	210,560	22,932	233,492
1985	129,948	40,490	5,164	175,602	24,452	2,525	26,977	25,338	0	25,338	42,352	0	42,352	92,142	2,525	94,667	270,269	35,746	306,015
1986	59,352	51,307	2,793	113,452	2,045	0	2,045	22,053	395	22,448	1,892	182	2,074	25,990	577	26,567	140,019	11,464	151,483
1987	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40,591	40,591
1988	44,890	31,845	2,090	78,825	15,662	1,421	17,083	16,989	0	16,989	21,844	1,806	23,650	54,495	3,227	57,722	136,547	30,263	166,810
1989	74,235	97,558	15,332	187,125	11,776	3,407	15,183	18,215	3,989	22,204	49,090	7,353	56,443	79,081	14,749	93,830	280,955	17,549	298,504
1990	25,269	37,077	3,715	66,061	4,989	2,351	8,166	7,778	1,058	8,976	43,182	7,535	50,975	55,949	10,944	68,117	134,178	27,537	161,715
1991	59,724	102,628	9,213	171,565	3,737	1,616	6,091	27,355	3,625	32,114	28,195	14,154	44,448	59,287	19,395	82,653	254,218	31,404	285,622
1992	0	0	0	0	0	0	0	0	0	0	15,721	2,806	19,022	15,721	2,806	19,022	19,022	18,576	37,598
1993	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,762	7,762
1994	0	0	0	0	0	0	0	3,630	0	3,630	1	3,276	4,369	3,631	3,276	7,999	7,999	30,035	38,034
5 Yr. Ave 1984-88	62,588	38,889	3,295	104,772	9,957	1,232	11,189	17,688	90	17,778	17,330	409	17,739	44,975	1,731	46,707	151,479	28,199	179,678
5 Yr. Ave 1989-93	31,846	47,453	5,652	84,950	4,100	1,475	5,888	10,670	1,734	12,659	27,238	6,370	34,178	42,008	9,579	52,724	137,675	20,566	158,240

<sup>a</sup> Sales reported in numbers of fish sold in the round and pounds of unprocessed roe, which may include small amounts of coho salmon roe. Since 1990, efforts were made to separate coho roe from fall chum roe. Does not include department test fish sales.

<sup>b</sup> All fish sold in the round. Includes department test fish sales prior to 1988.

<sup>c</sup> The estimated harvest is the fish sold in the round plus the estimated number of females to produce the roe sold.

<sup>d</sup> In 1974, District 4 was subdivided to include Districts 5 and 6.

<sup>e</sup> Does not include 884 female fall chum salmon sold in Subdistrict 6-C with roe extracted and roe sold separately. Females are accounted for in the estimated harvest to produce roe sold.

Appendix A.4. Commercial coho salmon sales by district, Yukon River drainage in Alaska, 1961-1994.

Upper Yukon Area <sup>a</sup>																	
Lower Yukon Area <sup>b</sup>					District 4			District 5			District 6			Subtotal			Total Harvest
Year	District 1	District 2	District 3	Subtotal	Number	Roe	Estimated Harvest <sup>c</sup>	Number	Roe	Estimated Harvest <sup>c</sup>	Number	Roe	Estimated Harvest <sup>c</sup>	Number	Roe	Estimated Harvest <sup>c</sup>	
1961	2,855	-	-	2,855	-	-	-	-	-	-	-	-	-	0	0	0	2,855
1962	22,926	-	-	22,926	-	-	-	-	-	-	-	-	-	0	0	0	22,926
1963	5,572	-	-	5,572	-	-	-	-	-	-	-	-	-	0	0	0	5,572
1964	2,446	-	-	2,446	-	-	-	-	-	-	-	-	-	0	0	0	2,446
1965	350	-	-	350	-	-	-	-	-	-	-	-	-	0	0	0	350
1966	19,254	-	-	19,254	-	-	-	-	-	-	-	-	-	0	0	0	19,254
1967	9,925	-	1,122	11,047	-	-	-	-	-	-	-	-	-	0	0	0	11,047
1968	13,153	-	150	13,303	-	-	-	-	-	-	-	-	-	0	0	0	13,303
1969	13,989	-	1,009	14,998	-	-	-	-	-	-	-	-	-	0	0	95	15,093
1970	12,632	-	-	12,632	-	-	-	-	-	-	-	-	-	0	0	556	13,188
1971	12,165	-	-	12,165	-	-	-	-	-	-	-	-	-	0	0	38	12,203
1972	21,705	506	-	22,211	-	-	-	-	-	-	-	-	-	0	0	22	22,233
1973	34,860	1,781	-	36,641	-	-	-	-	-	-	-	-	-	0	0	0	36,641
1974 <sup>d</sup>	13,713	176	-	13,889	0	-	0	1,409	-	1,409	1,479	-	1,479	2,888	0	2,888	16,777
1975	2,288	200	-	2,488	0	-	0	5	-	5	53	-	53	58	0	58	2,546
1976	4,064	17	-	4,081	0	-	0	0	-	0	1,103	-	1,103	1,103	0	1,103	5,184
1977	31,720	5,319	538	37,577	0	-	0	2	-	2	1,284	-	1,284	1,286	0	1,286	38,863
1978	16,460	5,835	758	23,053	32	-	32	1	-	1	3,066	-	3,066	3,099	0	3,099	26,152
1979	11,369	2,850	-	14,219	155	-	155	0	-	0	2,791	-	2,791	2,946	0	2,946	17,165
1980	4,829	2,660	-	7,489	30	-	30	0	-	0	1,226	-	1,226	1,256	0	1,256	8,745
1981	13,129	7,848	419	21,396	0	-	0	0	-	0	2,284	-	2,284	2,284	0	2,284	23,680
1982	15,115	14,179	87	29,381	15	-	15	0	-	0	7,780	-	7,780	7,795	0	7,795	37,176
1983	4,595	2,557	-	7,152	0	-	0	0	-	0	6,168	-	6,168	6,168	0	6,168	13,320
1984	29,472	43,064	621	73,157	1,095	-	1,095	0	-	0	7,688	-	7,688	8,783	0	8,783	81,940
1985	27,676	17,125	171	44,972	938	-	938	0	-	0	11,762	-	11,762	12,700	0	12,700	57,672
1986	24,824	21,197	793	46,814	0	-	0	0	-	0	441	-	441	441	0	441	47,255
1987	0	0	0	0	0	-	0	0	-	0	0	-	0	0	0	0	0
1988	36,028	34,758	1,419	72,205	2	-	2	8	-	8	13,972	-	13,972	13,982	0	13,982	86,187
1989	22,987	38,402	3,988	65,377	3	-	3	84	-	84	16,084	-	16,084	16,171	0	16,171	81,548
1990	12,160	16,405	918	29,483	0	-	0	0	-	0	11,549 <sup>e</sup>	4,042	14,804	11,549	4,042	14,804	44,287
1991	54,095	40,898	1,905	96,898	14	0	14	0	0	0	6,268	4,299	9,774	6,282	4,299	9,788	106,686
1992	0	0	0	0	0	0	0	0	0	0	6,556	1,680	7,979	6,556	1,680	7,979	7,979
1993	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1994	0	0	0	0	0	0	0	0	0	0	120	5,588	4451	120	5,588	4,451	4,451
5 Yr Ave																	
1984-88	23,600	23,229	601	47,430	407	-	407	-	-	-	6,773	-	6,773	7,181	-	7,181	54,611
5 Yr Ave																	
1989-93	17,848	19,141	1,362	38,352	3	-	3	17	0	17	8,091	2,004	9,728	8,112	2,004	9,748	48,100

<sup>a</sup> Sales reported in numbers of fish sold in the round and pounds of roe. Since 1990, efforts were made to separate coho and fall chum salmon roe. Does not include department test fish sales.

<sup>b</sup> All sales are fish in the round. Includes department test fish sales prior to 1988.

<sup>c</sup> The estimated harvest is the fish sold in the round plus the estimated number of females caught to produce the roe sold.

<sup>d</sup> In 1974, District 4 was subdivided to include Districts 5 and 6.

<sup>e</sup> Does not include 438 female coho salmon sold in District 6-C with roe extracted and roe sold separately. These fish are included in estimated harvest to produce roe sold.

Appendix A.5. Chinook salmon escapement counts for selected Alaskan spawning stocks in the Yukon River drainage, 1961-1994 <sup>a</sup>

Year	Andreafsky River			Anvik River		Nulato River			Gisasa River		Pop. Est. or Tower Counts	Chena River		Pop. Est. or Tower Counts	Salcha River		
	East Fork		West Fork Aerial	Aerial		Mainstem Tower Counts	Aerial		Aerial			Aerial	Index Area <sup>d</sup>				
	Aerial	Tower or Weir Cnt		River <sup>b</sup>	Index Area <sup>b</sup>		North Fork <sup>c</sup>	South Fork	Aerial	Weir					River	Index Area <sup>d</sup>	River
1961	1,003				1,226		376 <sup>g</sup>	167		266 <sup>g</sup>					2,878		
1962	675 <sup>g</sup>		762 <sup>g</sup>									61 <sup>g, h</sup>			937		
1963												137 <sup>g</sup>					
1964	867		705												450		
1965			344 <sup>g</sup>		650 <sup>g</sup>										408		
1966	361		303		638										800		
1967			276 <sup>g</sup>		336 <sup>g</sup>												
1968	380		383		310 <sup>g</sup>										739		
1969	274 <sup>g</sup>		231 <sup>g</sup>		296 <sup>g</sup>										461 <sup>g</sup>		
1970	665		574 <sup>g</sup>		368							6 <sup>g</sup>			1,882		
1971	1,904		1,682									193 <sup>g, h</sup>			158 <sup>g</sup>		
1972	798		582 <sup>g</sup>		1,198							138 <sup>g, h</sup>			1,193	1,034	
1973	825		788		613							21 <sup>g</sup>			391	352 <sup>i</sup>	
1974			285		471 <sup>g</sup>		55 <sup>g</sup>	23 <sup>g</sup>	161			1,016 <sup>h</sup>	959 <sup>h</sup>		1,857	1,620	
1975	993		301		730		123	81	385			316 <sup>h</sup>	262 <sup>h</sup>		1,055	950 <sup>i</sup>	
1976	818		643		1,053		471	177	332			531	496		1,641	1,473	
1977	2,008		1,499		1,371		286	201	255			563			1,202	1,052	
1978	2,487		1,062		1,324		498	422	45 <sup>g</sup>			1,726			3,499	3,258	
1979	1,180		1,134		1,484		1,093	414	484			1,159 <sup>g</sup>			4,789	4,310 <sup>i</sup>	
1980	958 <sup>g</sup>		1,500		1,330	1,192	954 <sup>g</sup>	369 <sup>g</sup>	951			2,541			6,757	6,126	
1981	2,146 <sup>g</sup>		231 <sup>g</sup>		807 <sup>g</sup>	577 <sup>g</sup>		791				600 <sup>g</sup>			1,237	1,121	
1982	1,274		851						421			2,073			2,534	2,346	
1983					653 <sup>g</sup>	376 <sup>g</sup>	526	480	572			2,553	2,336		1,961	1,803	
1984	1,573 <sup>g</sup>		1,993		641 <sup>g</sup>	574 <sup>g</sup>						501	494		1,031	906	
1985	1,617		2,248		1,051	720	1,600	1,180	735			2,553	2,262		2,035	1,860	
1986	1,954	1,530 <sup>k</sup>	3,158		1,118	918	1,452	1,522	1,346		9,065 <sup>m</sup>	2,031	1,935		3,368	3,031 <sup>i</sup>	
1987	1,608	2,011 <sup>k</sup>	3,281		1,174	879	1,145	493	731		6,404 <sup>m</sup>	1,312	1,209	4,771 <sup>m</sup>	1,898	1,671	
1988	1,020	1,339 <sup>k</sup>	1,448		1,805	1,449	1,061	714	797		3,346 <sup>m</sup>	1,966	1,760	4,562 <sup>m</sup>	2,761	2,553	
1989	1,399		1,089		442 <sup>g</sup>	212 <sup>g</sup>					2,666 <sup>m</sup>	1,280	1,185	3,294 <sup>m</sup>	2,333	2,136	
1990	2,503		1,545		2,347	1,595	568 <sup>g</sup>	430 <sup>g, h</sup>	884 <sup>g</sup>		5,603 <sup>m</sup>	1,436	1,402	10,728 <sup>m</sup>	3,744	3,429	
1991	1,938		2,544		875 <sup>g</sup>	625 <sup>g</sup>	767	1,253	1,690		3,025 <sup>m</sup>	1,277 <sup>g</sup>	1,277 <sup>g</sup>	5,608 <sup>m</sup>	2,212 <sup>g</sup>	1,925 <sup>g</sup>	
1992	1,030 <sup>g</sup>		2,002 <sup>g</sup>		1,536	931	348	231	910		5,230 <sup>m</sup>	825 <sup>g</sup>	799 <sup>g</sup>	7,862 <sup>m</sup>	1,484 <sup>g</sup>	1,436	
1993	5,855		2,765		1,720	1,526	1,844	1,181	1,573		12,241 <sup>k</sup>	2,943	2,660	10,007 <sup>k</sup>	3,636	3,562	
1994 <sup>v</sup>	300 <sup>g</sup>	7,801 <sup>p, r</sup>	213 <sup>g</sup>		913 <sup>g</sup>				1,795 <sup>s</sup>	2,775	2,888 <sup>p, t</sup>	12,006 <sup>k</sup>	1,570	1,570	18,376 <sup>k</sup>	11,823	11,189
E.O. <sup>w</sup>	>1,500		>1,400		>1,300 <sup>x</sup>	>500 <sup>x</sup>	>800	>500		>600				>1,700		>2,500	

<sup>a</sup> Data obtained by aerial survey unless otherwise noted. Only peak counts are listed. Survey rating is fair to good, unless otherwise noted. Latest table revision: April 5, 1995.

<sup>b</sup> From 1961-1970, river count data are from aerial surveys of various segments of the mainstem Anvik River. From 1972-1979, counting tower operated; mainstem aerial survey counts below the tower were added to tower counts. From 1980-present, aerial survey counts for the river are best available minimal estimates for the entire Anvik River drainage. Index area counts are from the mainstem Anvik River between the Yellow River and McDonald Creek.

<sup>c</sup> Includes mainstem counts below the confluence of the North and South Forks, unless otherwise noted.

<sup>d</sup> Chena River index area for assessing the escapement objective is from Moose Creek Dam to Middle Fork River.

<sup>e</sup> Salcha River index area for assessing the escapement objective is from the TAPS crossing to Caribou Creek.

<sup>f</sup> Incomplete and/or poor survey conditions resulting in minimal or inaccurate counts.

<sup>g</sup> Boat survey.

<sup>h</sup> Data unavailable for index area. Calculated from historic (1972-91) average ratio of index area counts to total river counts (0.90:1.0).

<sup>i</sup> Tower Counts

<sup>j</sup> Population estimate

<sup>k</sup> Mainstem counts below the confluence of the North and South Forks Nulato River included in the South Fork counts.

<sup>l</sup> Weir Counts

<sup>m</sup> Weir installed on June 29; first full day of counts June 30.

<sup>n</sup> Tower counts delayed until June 29 because of high, turbid water. First full day of counts occurred on June 30.

<sup>o</sup> Weir installed on July 11; first full day of counts July 12.

<sup>p</sup> Preliminary.

<sup>q</sup> Interim escapement objectives. Established March, 1992.

<sup>r</sup> Interim escapement objective for the entire Anvik River drainage is 1,300 salmon. Interim escapement objective for mainstem Anvik River between the Yellow River and McDonald Creek is 500 salmon.

Year	Tincup Creek <sup>a</sup>	Tatchun River <sup>a,b</sup>	Little Salmon River <sup>a</sup>	Big Salmon River <sup>a,c</sup>	Nisutlin River <sup>a,d</sup>	Ross River <sup>a,f</sup>	Wolf River <sup>a,g</sup>	Whitehorse Fishway <sup>h</sup>	Canada Mainstem Tagging Estimate <sup>i</sup>
1961								1,068	
1962								1,500	
1963								483	
1964								595	
1965								903	
1966		7 <sup>k</sup>						563	
1967								533	
1968			173 <sup>k</sup>	857 <sup>k</sup>	407 <sup>k</sup>	104 <sup>k</sup>		414	
1969			120	286	105			334	
1970		100		670	615		71 <sup>k</sup>	625	
1971		130	275	275	650		750	856	
1972		80	126	415	237		13	391	
1973		99	27 <sup>k</sup>	75 <sup>k</sup>	36 <sup>k</sup>			224	
1974		192		70 <sup>k</sup>	48 <sup>k</sup>			273	
1975		175		153 <sup>k</sup>	249		40 <sup>k</sup>	313	
1976		52		86 <sup>k</sup>	102			121	
1977		150	408	316 <sup>k</sup>	77			277	
1978		200	330	524	375			725	
1979		150	489 <sup>k</sup>	632	713		183 <sup>k</sup>	1,184	
1980		222	286 <sup>k</sup>	1,436	975		377	1,383	
1981		133	670	2,411	1,626	949	395	1,555	
1982		73	403	758	578	155	104	473	19,790
1983	100	264	101 <sup>k</sup>	540	701	43 <sup>k,n</sup>	95	905	28,989
1984	150	153	434	1,044	832	151 <sup>k</sup>	124	1,042	27,616 <sup>m</sup>
1985	210	190	255	801	409	23 <sup>k</sup>	110	508	10,730
1986	228	155	54 <sup>k</sup>	745	459 <sup>k</sup>	72 <sup>n</sup>	109	557	16,415
1987	100	159	468	891	183	180 <sup>k</sup>	35	327	13,260
1988	204	152	368	765	267	242	66	405	23,118
1989	88	100	862	1,662	695	433 <sup>p</sup>	146	549	25,201
1990	83	643	665	1,806	652	457 <sup>k</sup>	188	1,407	37,699
1991			326	1,040		250	201 <sup>r</sup>	1,266	20,743
1992	73	106	494	617	241	423	110 <sup>r</sup>	758	25,497
1993		183	184	572	339	400	168 <sup>r</sup>	668	28,558
1994 <sup>s</sup>	101 <sup>k</sup>	477	726	1,764	389	506	393 <sup>r</sup>	1,577	25,027
E.O.								33,000 - 43,000 <sup>t</sup>	

<sup>a</sup> Data obtained by aerial survey unless otherwise noted. Only peak counts are listed. Survey rating is fair to good, unless otherwise noted. Latest table revision: November 23, 1994.

<sup>b</sup> All foot surveys except 1978 (boat survey) and 1986 (aerial survey).

<sup>c</sup> For 1968, 1970, and 1971 counts are from mainstem Big Salmon River. For all other years counts are from the mainstem Big Salmon River between Big Salmon Lake and the vicinity of Souch Creek.

<sup>d</sup> One Hundred Mile Creek to Sidney Creek.

<sup>e</sup> Big Timber Creek to Lewis Lake.

<sup>f</sup> Wolf Lake to Red River.

<sup>g</sup> Includes 50, 90, 292, 506, 243, 288 fin-clipped hatchery-origin salmon in 1988, 1989, 1990, 1991, 1992, and 1993, respectively.

<sup>h</sup> Estimated total spawning escapement excluding Porcupine River (estimated border escapement minus the Canadian catch).

<sup>i</sup> Incomplete and/or poor survey conditions resulting in minimal or inaccurate counts.

<sup>m</sup> Estimate derived by dividing the annual 5-area (Whitehorse Fishway, Big Salmon, Nisutlin, Wolf, Tatchun) count by the average proportion of the annual 5-area index count to the estimated spawning escapements from the DFO tagging study for years 1982, 1983, and 1985-1989.

<sup>n</sup> Information on area surveyed is unavailable.

<sup>p</sup> Counts are for Big Timber Creek to Sheldon Lake.

<sup>r</sup> Counts are for Wolf Lake to Fish Lake outlet.

<sup>s</sup> Preliminary. Area surveyed unknown.

<sup>t</sup> Interim escapement objective. Stabilization escapement objective for years 1990 - 1995 is 18,000 salmon.

Appendix A.7. Summer chum salmon escapement counts for selected spawning areas in the Yukon River drainage, 1973-1994.

Year	Andreafsky River			Anvik River		Rodo River <sup>a</sup>	Kallag Cr. Tower Counts	Nulato River		Mainstem Tower Counts	Gisasa River		Hogatza River <sup>a</sup> (Clear & Caribou Creeks)	Tozitna River <sup>a</sup>	Chena River		Salcha River	
	East Fork		West Fork <sup>a</sup>	Tower & Aerial <sup>b</sup>	Sonar			South Fork	North Fork <sup>c</sup>		Aerial	Weir			Aerial	Tower	Aerial	Tower
	Aerial <sup>a</sup>	Sonar, Tower, or Weir Cnts																
1973	10,149 <sup>d</sup>		51,835	249,015												79 <sup>d</sup>		290
1974	3,215 <sup>d</sup>		33,578	411,133		16,137		29,016	29,334			22,022		1,823	4,349			3,510
1975	223,485		235,954	900,967		25,335		51,215	87,280			56,904	22,355	3,512	1,670			7,573
1976	105,347		118,420	511,475		38,258		9,230 <sup>d</sup>	30,771			21,342	20,744	725 <sup>d</sup>	685			6,484
1977	112,722		63,120	358,771		16,118		11,385	58,275			2,204 <sup>d</sup>	10,734	761 <sup>d</sup>	610			677 <sup>d</sup>
1978	127,050		57,321	307,270		17,845		12,821	41,659			9,280 <sup>d</sup>	5,102	2,262	1,609			5,405
1979	66,471		43,391		280,537			1,506	35,598			10,962	14,221		1,025 <sup>d</sup>			3,060
1980	36,823 <sup>d</sup>		114,759		492,676			3,702 <sup>d</sup>	11,244 <sup>d</sup>			10,388	19,786	580	338			4,140
1981	81,555	147,312 <sup>d</sup>			1,486,182			14,348							3,500			8,500
1982	7,501 <sup>d</sup>	181,352 <sup>d</sup>	7,267 <sup>d</sup>		444,581							334 <sup>d</sup>	4,984 <sup>d</sup>	874	1,509			3,756
1983		110,608 <sup>d</sup>			362,912			1,263 <sup>d</sup>	19,749			2,356 <sup>d</sup>	28,141	1,604	1,097			716 <sup>d</sup>
1984	95,200 <sup>d</sup>	70,125 <sup>d</sup>	238,565		891,028								184 <sup>d</sup>		1,861			9,810
1985	66,146		52,750		1,080,243	24,576		10,494	19,344			13,232	22,566	1,030	1,005			3,178
1986	83,931	167,614 <sup>h</sup>	99,373		1,189,602			16,848	47,417			12,114		1,778	1,509			8,028
1987	6,687 <sup>d</sup>	45,221 <sup>h</sup>	35,535		455,876			4,094	7,163			2,123	5,669 <sup>d</sup>		333			3,657
1988	43,056	68,937 <sup>h</sup>	45,432		1,125,449	13,872		15,132	26,951			9,284	6,890	2,983	432			2,889 <sup>d</sup>
1989	21,460 <sup>d</sup>				636,906										714 <sup>d</sup>			1,574 <sup>d</sup>
1990	11,519 <sup>d</sup>		20,426 <sup>d</sup>		403,627	1,941 <sup>d</sup>		3,196 <sup>d,j</sup>	1,419 <sup>d</sup>			450 <sup>d</sup>	2,177 <sup>d</sup>	36	245 <sup>d</sup>			450 <sup>d</sup>
1991	31,886		46,657		847,772	3,977		13,150	12,491			7,003	9,947	93	115 <sup>d</sup>			154 <sup>d</sup>
1992	11,308 <sup>d</sup>		37,808 <sup>d</sup>		775,626	4,465		5,322	12,358			9,300	2,986	794	848 <sup>d</sup>			3,222
1993	10,935 <sup>d</sup>		9,111 <sup>d</sup>		517,409	7,867		5,486	7,698			1,581		970	168	5,487	212	5,563
1994 <sup>y</sup>		200,981 <sup>n,p</sup>			1,124,689		47,295			148,762 <sup>i</sup>	6,827	51,116 <sup>s</sup>			1,137	10,108	4,679	39,343
E.O. <sup>l</sup>	>109,000		>116,000		>500,000 <sup>v</sup>				>53,000 <sup>x</sup>				>17,000 <sup>x</sup>					>3,500

<sup>a</sup> Data obtained by aerial survey unless otherwise noted. Only peak counts are listed. Latest table revision April 3, 1995.<sup>b</sup> From 1972-1979 counting tower operated; escapement estimate listed is the tower counts plus expanded aerial survey counts below the tower (see Buklis 1982).<sup>c</sup> Includes mainstem counts below the confluence of the North and South Forks, unless otherwise noted.<sup>d</sup> Incomplete survey and/or poor survey timing or conditions resulted in minimal or inaccurate count.<sup>e</sup> Boat survey.<sup>f</sup> Sonar count.<sup>g</sup> Tower count.<sup>h</sup> Mainstem counts below the confluence of the North and South Forks Nulato River included in the South Fork counts.<sup>i</sup> Tower Count<sup>j</sup> Weir Count<sup>k</sup> Weir installed on June 29. First full day of counts occurred on June 30.<sup>l</sup> Tower counts delayed until June 29 because of high, turbid water. First full day of counts occurred on June 30.<sup>m</sup> Weir installed on July 11. First full day of counts occurred on July 12.<sup>n</sup> Interim escapement objective.<sup>o</sup> The Anvik River Escapement Objective was rounded upward to 500,000 from 487,000 in March, 1992.<sup>p</sup> Interim escapement objective for North Fork Nulato River only.<sup>q</sup> Consists of Clear and Caribou Creeks interim escapement objectives of 9,000 and 8,000, respectively.<sup>r</sup> Preliminary.

Appendix E.8. Fall chum salmon escapement counts for selected spawning areas in Alaskan and Canadian portions of the Yukon River drainage, 1974-1994. <sup>a</sup>

Year	Alaska				Canada					
	Toklat River <sup>b</sup>	Delta River <sup>c</sup>	Chandalar River <sup>d</sup>	Sheenjek River <sup>d, f</sup>	Fishing Branch River <sup>g</sup>	Mainstem Yukon River Index <sup>g, h</sup>	Koidem River <sup>g</sup>	Kluane River <sup>g, i</sup>	Teslin River <sup>g, k</sup>	Mainstem Tagging Estimate <sup>m</sup>
1971					312,800					
1972		5,384			35,125 <sup>n</sup>			198 <sup>p, r</sup>		
1973		10,469			15,989 <sup>s</sup>	383		2,500		
1974	41,798	5,915		89,966 <sup>t</sup>	32,525 <sup>s</sup>			400		
1975	92,265	3,734 <sup>v</sup>		173,371 <sup>t</sup>	353,282 <sup>s</sup>	7,671		362 <sup>r</sup>		
1976	52,891	6,312 <sup>v</sup>		26,354 <sup>t</sup>	36,584			20		
1977	34,887	16,876 <sup>v</sup>		45,544 <sup>t</sup>	88,400			3,555		
1978	37,001	11,136		32,449 <sup>t</sup>	40,800			0 <sup>r</sup>		
1979	158,336	8,355		91,372 <sup>t</sup>	119,898			4,640 <sup>r</sup>		
1980	26,346	5,137		28,933 <sup>t</sup>	55,268			3,150		
1981	15,623	23,508		74,560	57,386 <sup>w</sup>			25,806		
1982	3,624	4,235		31,421	15,901	1,020 <sup>x</sup>		5,378		31,958
1983	21,869	7,705		49,392	27,200	7,560		8,578 <sup>r</sup>		90,875
1984	16,758	12,411		27,130	15,150	2,800 <sup>y</sup>	1,300	7,200	200	56,633 <sup>z</sup>
1985	22,750	17,276 <sup>v</sup>		152,768	56,016 <sup>s</sup>	10,760	1,195	7,538	356	62,010
1986	17,976	6,703 <sup>v</sup>	59,313	84,207 <sup>aa</sup>	31,723 <sup>s</sup>	825	14	16,686	213	87,940
1987	22,117	21,180	52,416	153,267 <sup>aa</sup>	48,956 <sup>s</sup>	6,115	50	12,000		80,776
1988	13,436	18,024	33,619	45,206 <sup>aa</sup>	23,597 <sup>s</sup>	1,550	0	6,950	140	36,786
1989	30,421	21,342 <sup>v</sup>	69,161	99,116 <sup>aa</sup>	43,834 <sup>s</sup>	5,320	40	3,050	210 <sup>p</sup>	35,750
1990	34,739	8,992 <sup>v</sup>	78,631	77,750 <sup>aa</sup>	35,000 <sup>ab</sup>	3,651	1	4,683	739	51,755
1991	13,487	32,905 <sup>v</sup>		86,496 <sup>ac</sup>	37,733 <sup>s</sup>	2,426	53	11,675	468	78,461
1992	14,070	8,893 <sup>v</sup>		78,808 <sup>ac</sup>	22,517 <sup>s</sup>	4,438	4	3,339	450	49,082
1993	27,838	19,857		42,922 <sup>ac</sup>	28,707 <sup>s</sup>	2,620	0	4,610	555	29,743
1994 <sup>ad</sup>	73,867	23,300 <sup>af</sup>		153,000 <sup>ac</sup>	65,247 <sup>s</sup>	1,429 <sup>p</sup>	20 <sup>p</sup>	10,734	209 <sup>p</sup>	104,676
E.O. <sup>ag</sup>	> 33,000	> 11,000		> 64,000 <sup>ah</sup>	50,000 - 120,000					> 80,000

continued

Appendix E.8. (page 2 of 2).

- <sup>a</sup> Latest table revision April 14, 1995.
- <sup>b</sup> Expanded total abundance estimates for upper Toklat River index area using stream life curve (SLC) developed with 1987-1993 data. Index area includes Geiger Creek, Sushana River, and mainstem floodplain sloughs from approximately 0.25 mile upstream of roadhouse to approximately 1.25 mile downstream of roadhouse.
- <sup>c</sup> Estimates are a total spawner abundance, generally from using spawner abundance curves and streamlife data.
- <sup>d</sup> Side-scan sonar estimate, unless otherwise indicated.
- <sup>e</sup> Within the Canadian Porcupine River drainage. Total escapement estimated using weir to aerial survey expansion factor of 2.72, unless otherwise indicated.
- <sup>f</sup> Aerial survey count unless otherwise indicated.
- <sup>g</sup> Tatchun Creek to Fort Selkirk.
- <sup>h</sup> Duke River to end of spawning sloughs below Swede Johnston Creek.
- <sup>i</sup> Boswell Creek area (5 km below to 5 km above confluence).
- <sup>m</sup> Excludes Fishing Branch River escapement (estimated border passage minus Canadian removal).
- <sup>n</sup> Weir installed on September 22. Estimate consists of a weir count of 17,190 after September 22, and a tagging passage estimate of 17,935 prior to weir installation.
- <sup>p</sup> Incomplete and/or poor survey conditions resulting in minimal or inaccurate counts.
- <sup>r</sup> Foot survey
- <sup>s</sup> Weir count.
- <sup>t</sup> Total escapement estimate using sonar to aerial survey expansion factor of 2.22.
- <sup>v</sup> Population estimate from replicate foot surveys and stream life data.
- <sup>w</sup> Initial aerial survey count was doubled before applying the weir/aerial expansion factor of 2.72 since only half of the spawning area was surveyed.
- <sup>x</sup> Boat survey.
- <sup>y</sup> Total index area not surveyed. Survey included the mainstem Yukon River between Yukon Crossing to 30 km below Fort Selkirk.
- <sup>z</sup> Escapement estimate based on mark-recapture program unavailable. Estimate based on assumed average exploitation rate.
- <sup>aa</sup> Expanded estimates for period approximating second week August through middle fourth week September, using Chandalar River run timing data.
- <sup>ab</sup> Weir was not operated. Although only 7,541 chum salmon were counted on a single survey flown October 26, a population estimate of approximately 27,000 fish was made through date of survey, based upon historic average aerial-to-weir expansion of 28%. Actual population of spawners was reported by DFO as between 30,000 - 40,000 fish considering aerial survey timing.
- <sup>ac</sup> Total abundance estimates are for the period approximating second week August through middle fourth week of September. Comparatively escapement estimates prior to 1986 are considered more conservative; approximating the period of end of August through middle week of September.
- <sup>ad</sup> Preliminary.
- <sup>af</sup> Preliminary final estimate using Delta River MTD curve; based upon a ground count of 16,131 chums observed on October 25, 1994.
- <sup>ag</sup> Interim escapement objective.
- <sup>ah</sup> Based on escapement estimates for years 1974-1990.

Appendix A.9. Coho salmon escapement counts for selected spawning areas in the Yukon River drainage, 1972-1994<sup>a</sup>

Year	Andreafsky River		Kantishna River			Nenana River Drainage				Delta Clearwater River <sup>f, g</sup>	Clearwater Lake and Outlet	Richardson Clearwater River
	East Fork	West Fork	Anvik River	Geiger Creek	Barton Creek	Lost Slough	Nenana Mainstem <sup>b</sup>	Wood Creek <sup>c</sup>	Seventeen Slough			
1972										630	417	454 <sup>k</sup>
1973										3,322	551 <sup>f</sup>	375 <sup>f</sup>
1974						1,388			27	3,954 <sup>i</sup>	560	652 <sup>f</sup>
1975						943			956	5,100	1,575 <sup>f, h</sup>	4 <sup>k</sup>
1976			467 <sup>k</sup>	25 <sup>j</sup>		118			281	1,920	1,500 <sup>f, h</sup>	80 <sup>k</sup>
1977			81 <sup>k</sup>	60		524		310 <sup>b</sup>	1,167	4,793	730 <sup>f, h</sup>	327
1978						350		300 <sup>b</sup>	466	4,798	570 <sup>f, h</sup>	
1979						227			1,987	8,970	1,015 <sup>f, h</sup>	372
1980				3 <sup>j</sup>		499		1,603 <sup>b</sup>	592	3,946	1,545 <sup>f, h</sup>	611
1981	1,657 <sup>k</sup>					274		849 <sup>n, r</sup>	1,005	8,563 <sup>p</sup>	459 <sup>k</sup>	550
1982				81				1,436 <sup>n, r</sup>		8,365 <sup>p</sup>		
1983				42		766		1,042 <sup>n</sup>	103	8,019 <sup>p</sup>	253	88
1984				20 <sup>j</sup>		2,677		8,826 <sup>n</sup>		11,061	1,368	428
1985				42 <sup>j</sup>		1,584		4,470 <sup>n</sup>	2,081	5,358	750	
1986				5	496	794		1,664 <sup>n</sup>	218 <sup>d, h</sup>	10,857	3,577	146 <sup>k</sup>
1987				1,175		2,511		2,387 <sup>n</sup>	3,802	22,300	4,225 <sup>f, h</sup>	
1988	1,913	830	1,203	159	437	348		2,046 <sup>n</sup>		21,600	825 <sup>f, h</sup>	
1989				155	12 <sup>k</sup>			412 <sup>n</sup>	824 <sup>k</sup>	11,000	1,600 <sup>f, h</sup>	483
1990				211		688	1,308		15 <sup>k</sup>	8,325	2,375 <sup>f, h</sup>	
1991				427	467 <sup>k</sup>	564	447		52	23,900	3,150 <sup>f, h</sup>	
1992				77	55 <sup>k</sup>	372			490	3,963	229 <sup>f, h</sup>	500 <sup>f</sup>
1993				138	141	484	419	666 <sup>n, s</sup>	581	10,875	3,525 <sup>f, h</sup>	
1994 <sup>t</sup>				410	2,000 <sup>n, w</sup>	944	1,647	1,317 <sup>n, x</sup>	2,909	62,675 <sup>y</sup>	3,425 <sup>f, h</sup>	5,800 <sup>f</sup>
E.O.										>9,000 <sup>u</sup>		

<sup>a</sup> Only peak counts presented. Survey rating is fair to good, unless otherwise noted. Latest table revision: November 29, 1994.

<sup>b</sup> Foot survey.

<sup>c</sup> Mainstem Nenana River between confluences of Lost Slough and Teklanika River.

<sup>d</sup> Surveyed by F.R.E.D.

<sup>e</sup> Surveyed by Sport Fish Division.

<sup>f</sup> Boat survey counts in the lower 17.5 river miles, unless otherwise indicated.

<sup>h</sup> Boat Survey.

<sup>j</sup> Aerial survey.

<sup>k</sup> Poor survey.

<sup>n</sup> Weir count.

<sup>p</sup> Expanded estimate based on partial survey counts and historic distribution of spawners from 1977-1980.

<sup>r</sup> Coho weir was operated at the mouth of Clear Creek (Shores Landing).

<sup>s</sup> Weir project terminated on October 4. Weir normally operated until mid to late October.

<sup>t</sup> Preliminary.

<sup>u</sup> Interim escapement objective established March, 1993, based on boat survey counts of coho salmon in the lower 17.5 river miles during the period October 21-27.

<sup>w</sup> A total of 298 coho salmon were passed between September 11 and October 4. However, it was estimated that 1,500 to 2,000 coho salmon passed the weir site within a 24-hour period beginning at approximately noon on October 4. Weir operated from August 18 through morning of October 5, 1994.

<sup>x</sup> Weir project terminated September 27. Weir normally operated until mid-October.

<sup>y</sup> An additional 17,565 coho salmon were counted by helicopter in the Delta Clearwater outside of the normal mainstem index area.



## **Appendix B**

### **Yukon Area Salmon Fishery Regulation Changes**

## Appendix B. Yukon Area Salmon Fishery Regulation Changes, 1995.

To keep Yukon Area salmon fishermen, processors, and other interested individuals informed of current fishing regulations, the department is providing this partial summary of regulatory changes that the Alaska Board of Fisheries has recently adopted. This summary of actions is limited to selected proposals addressed by the board during the November 8 through November 14, 1994 meeting in Anchorage. *The following summary is for informational purposes only, and is not intended to detail, reflect, or fully interpret the reasons for the board's actions.*

1. Allow subsistence fishermen in **Subdistrict 4-A**, downstream from the mouth of Stink Creek, to take king salmon by drift gillnets from June 21 through July 14.

### DRAFT REGULATORY WORDING.

*5 AAC 01.220. LAWFUL GEAR AND GEAR SPECIFICATIONS. (e) (3) in Subdistrict 4-A, downstream from the mouth of Stink Creek, king salmon may be taken by drift gillnets from June 15 through July 14.*

2. The Alaska Board of Fisheries amended the **Toklat River Fall Chum Salmon Rebuilding Management Plan** to provide for additional opportunities for Kantishna River subsistence fishermen when it can be determined that the Toklat River fall chum salmon escapement objective would be met. The section (2) (D) was added to the management plan:

### DRAFT REGULATORY WORDING.

*5 AAC 01.248. The Toklat River Fall Chum Salmon Rebuilding Management Plan. (2)(D) based on an evaluation of inseason run strength indicators, the department, by emergency order, may reopen the Kantishna River fall season chum salmon subsistence fishery and allow the fishery to exceed the 2,000 fall chum salmon harvest limit if indicators are that the Toklat River fall chum salmon minimum escapement objective described in this subsection will be achieved; the department shall close that fishery when it is determined it to be necessary for the conservation and protection of chum salmon;*

3. To protect fall chum salmon habitat, the board amended the regulation to **close the Delta River drainage** year-round to commercial, sport, personal use, and subsistence fishing between the mouth of the Delta River and a department marker placed two miles upstream from the mouth of the Delta River.

4. The board review and amended the Anvik River Chum Salmon Fishery Management Plan.

DRAFT REGULATORY WORDING.

5 AAC 05.368. ANVIK RIVER CHUM SALMON FISHERY MANAGEMENT PLAN. *The department shall not manage the Yukon River summer chum salmon run to specifically allow an allocation of catch to the Anvik River. It is the intent of the Board of Fisheries that Yukon River summer chum salmon be harvested in the fisheries that have historically harvested them, including the methods, means, times, locations, and guideline harvest levels for the respective districts and subdistricts within the Yukon Area; the following provisions apply to the Anvik River chum salmon fishery:*

*(1) only after the department projects that an escapement objective of 500,000 or more chum salmon will be achieved may the department open any portion of the Anvik River, upstream of department regulatory markers placed on each side of the river at its mouth, by emergency order to take chum salmon;*

*(2) in the Anvik River, the set gillnet fishery includes fish wheels, hand beach seine gear, and hand purse seine gear, and the fish wheel fishery includes set gill nets, hand beach seine gear, and hand purse seine gear; a fish wheel, set gillnet, and hand beach seine may be operated only as follows:*

*(A) only a fish wheel equipped with a livebox may be operated as follows:*

*(i) the "livebox" must be constructed so that it contains no less than 45 cubic feet of water volume while in operation;*

*(ii) for the purpose of this subparagraph a "livebox" is a submerged container that is attached to the fish wheel and that will keep fish caught by the fish wheel alive;*

*(B) notwithstanding 5 AAC 05.331 (a) and (d), a person may operate only a single set gillnet at any one time as follows:*

*(i) the gillnet may not exceed 25 fathoms in length and may not be larger than five and one-quarter inch stretch mesh; and*

*(ii) notwithstanding 5 AAC 39.107(f), a CFEC permit holder or crew member must be physically present at a set gillnet site at all times the set gillnet is in operation to continuously attend the set gillnet to release all king salmon alive to the water;*

*(C) for the purpose of this subsection, a "hand beach seine" is a beach seine which is retrieved by hand power or hand-powered crank and not by any type of electrical, hydraulic, mechanical or other device or attachment;*

*(3) notwithstanding (2) of this section, during times when the commissioner determines it to be necessary for the conservation of king salmon the commissioner, by emergency order, may close the fishing season for the set gillnet fishery and the fish wheel fishery in the Anvik River and immediately reopen the season during which only hand beach seines and hand purse seines may be used to take fish in those fisheries;*

*(4) no more than 50,000 pounds of summer chum salmon roe from the Anvik River may be sold annually. However, if this cap is reached, fishing effort may continue, but only the sale of chum salmon in the round will be allowed;*

*(5) any king salmon taken in the Anvik River during commercial fishing periods must be returned to the water alive;*

*(6) in the Anvik River, during periods specified by the department, a CFEC permit holder may not sell more than 600 chum salmon in-the-round or 400 pounds of chum salmon roe per commercial fishing period;*

*(7) this section is repealed April 30, 1998.*

5. The board took no action on the issue of developing a **coho salmon management plan**. However, the board charged the Yukon River Drainage Fisheries Association to work within its membership, with Yukon River drainage advisory committees, the public, and the department to develop management options for Yukon River drainage coho salmon. The plan may include provisions for a directed commercial coho salmon fishery if the means of identifying, inseason, the commercially harvestable surplus of coho salmon is available. The board encouraged the association to request the board for consideration of the plan prior to the regular 1997/1998 A-Y-K meeting cycle.

6. The board **reduce the depth of gillnets** in the Yukon River commercial salmon fishery from 60 to 45 meshes for gear greater than six inch mesh and from 70 to 50 meshes for gear with less than six inch mesh. The new regulation applied only to commercial fishing gear in Districts 1, 2, and 3. Additionally, to allow fishermen time to switch to the new gear restrictions, the board delayed the effective date until the 1996 fishing season.



